

91109083 E/S/D RD QC QY QZ

Channel 11

Completed
1973
Records

18
Box 4

Worksheet

Transient #2 - no other waveform seen similar to this

Transient #3 - not a gunshot - rise time at beg too slow

Transient #13 - no other waveform seen similar to this

Transient #15 - no other waveform seen similar to this

Transient #17 - no other waveform seen similar to this

Transient #18 - not similar ^{to other waveforms} but difficult to measure accurately
due to low amplitude small peaks before largest
transient peak.

Transient #19 - no other waveforms seen that match exactly however
the plot most likely comes from area of Ford
Fairlane sd van

Transient #20 - same as #19

Transient #21 - same as #19

Transient #22 - same as #19

Transient #23 - same as #19

Worksheet

Transient #25 - looks ~~to~~ like a gunshot with the original blast muffled and a strong echo - mostly likely comes from area of van and Ford Fairlane

Transient #26 - excellent match with #29, very good match with #31, excellent match with #32 & 33, fair match with #37 & 38

Transient #27 - #28 - #28 the echo from #27 - rest same as #19
Trans #28 - not a separate gunshot

Transient #29 - see #26

Transient #30 - somewhat like #34 but differences seen (shot from same general area), good match with #36, fair match with #39

Transient #31 - See #26

Transient #32 - See #26

Transient #33 - See #26

Transient #34 - See #30

Transient #35 - See as #25

00109030 E QZ

Clam 11 - 250 cm/sec

Worksheet

Transient # 36 - See # 30

Trant # 37 - See # 26

Trant # 38 - See # 26. Very good match between # 37 & # 38

Trant # 39 - Some similarities with # 51 & 52 but location slightly different

Trant # 40 - no other waveform exactly like this - not from area of Ford Fairlane ad van

Transient # 41 excellent match with # 42 - probably near Ford Fairlane & van

Trant # 42 see # 41

Trant # 43 different waveform - probably from area of Ford Fairlane & van

Trant # 44 excellent match with # 45 & # 47 & # 49 & # 51 & 52 -
51 & 52 higher amplitudes

Trant # 45 See # 44

Trant # 46 Same as # 25

Trant # 47 See # 44

00109030 E QZ
Clam 11-250 cm/sec

Worksheet

Transient #48 - Same as #25

Trans #49 - See #44

Trans #50 - Same as #19

Trans #51 - See #44

Trans #52 See #44

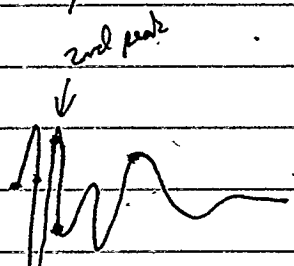
Trans #53 Looks like a distorted waveform overloading recording system

Transient #54 - Same as #19

Worksheet

All known and possible gunshots run at 250 cm/sec on
Honeywell Visicorder, model 1806A from reel-to-reel
audio copy

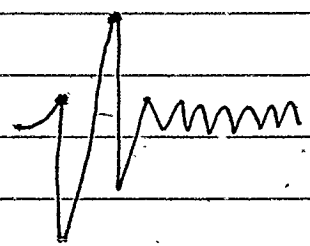
Transient #2:



Double Peaked leg waveform.

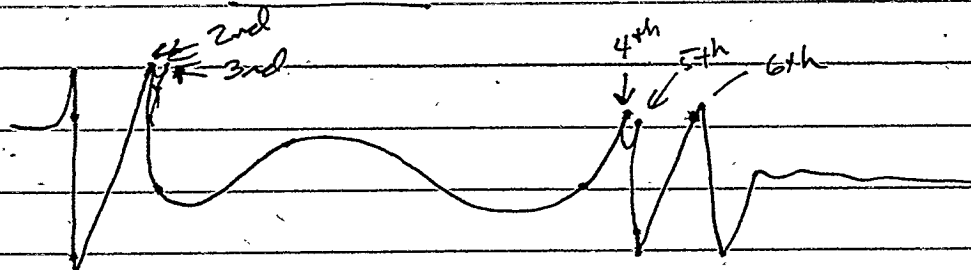
2nd peak at 0.0016 second

Transient #3



Worksheet

Transient # 13



2nd peak at .0038 second

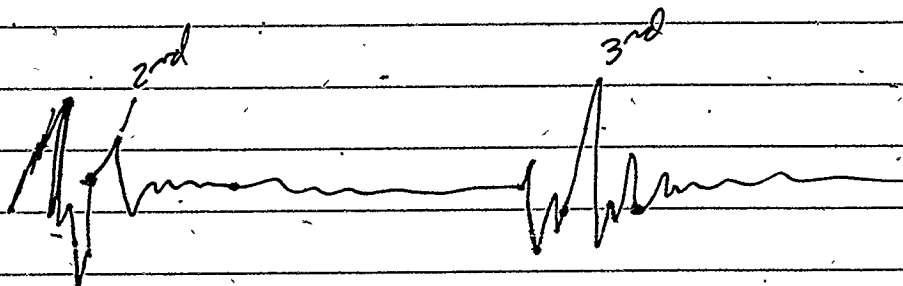
3rd " " .0042 second

4th " " .0602 "

5th " " .0606 "

6th " " .0632 "

Transient #15

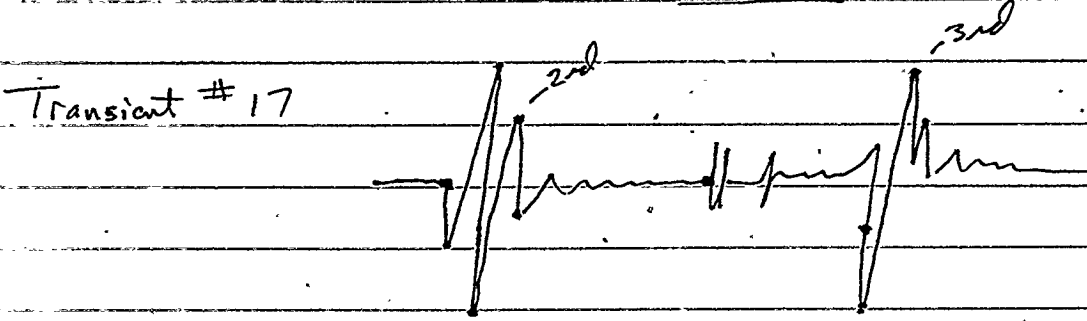


2nd peak at .0032 second

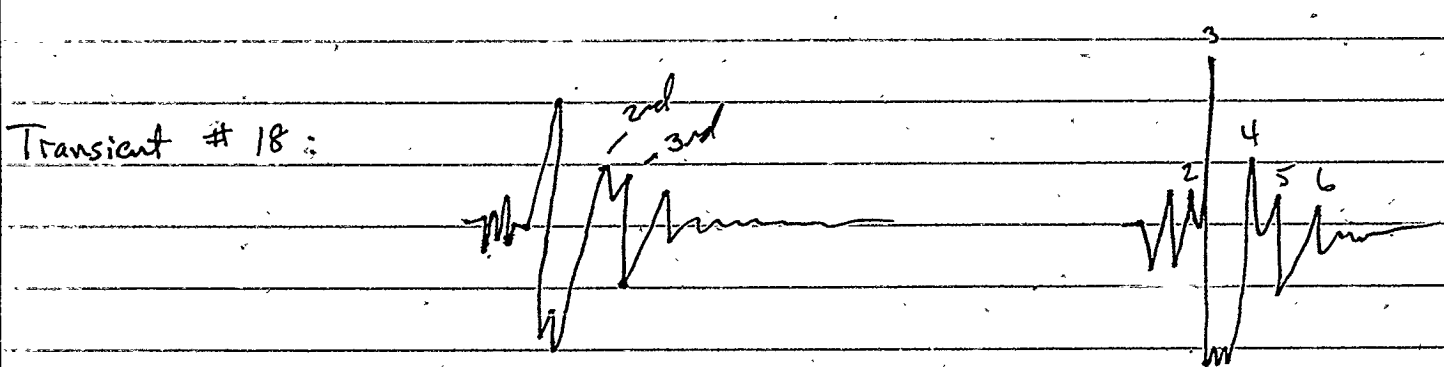
3rd " " .0542 "

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Channel 11

Worksheet



2nd peak at .0024 second
3rd " " .0406 "

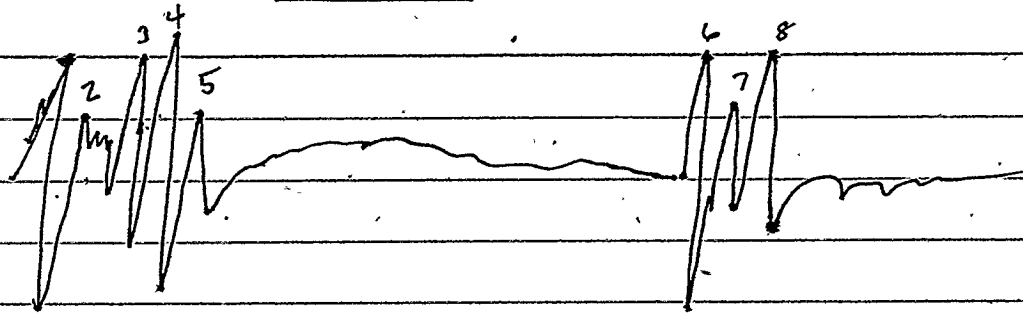


2nd peak at .0026 second
3rd " " .0038 "

2nd peak at .0008 second
3rd " " .0018 "
4th " " .0044 "
5th " " .0054 "
6th " " .0080 "

Worksheet

Transient #19



2nd peak at .0026 second

3rd " " .0046 "

4th " " .0066 "

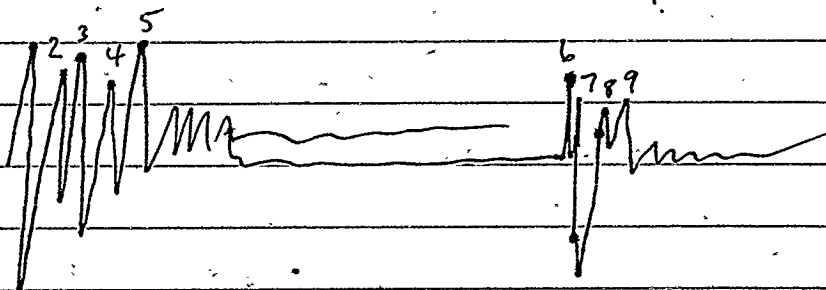
5th " " .0088 "

6th " " .0958 "

7th " " .0972 "

8th " " .0986 "

Transient #20



2nd peak at .0020 second

3rd " " .0030 "

4th " " .0046 "

5th " " .0060 "

6th " " .0962 "

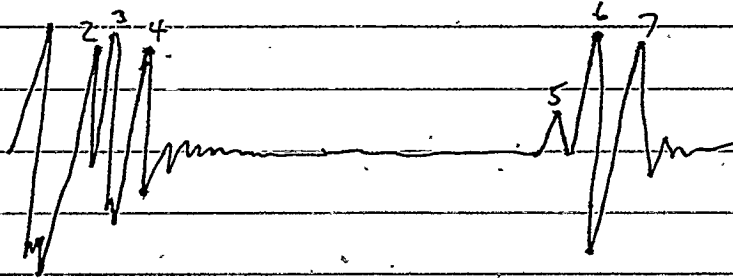
7th " " .0966 "

8th " " .0980 "

9th " " .0986 "

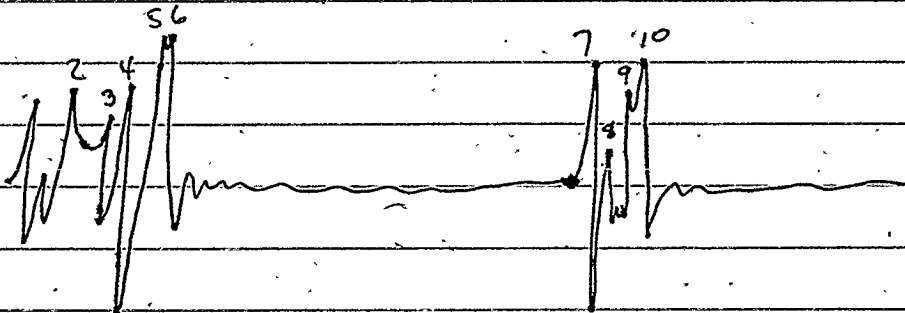
Worksheet

Transient #21:



2nd peak	at	.0022	second
3rd	" "	.0032	" "
4th	" "	.0062	" "
5th	" "	.0952	" "
6th	" "	.0966	" "
7th	" "	.0988	" "

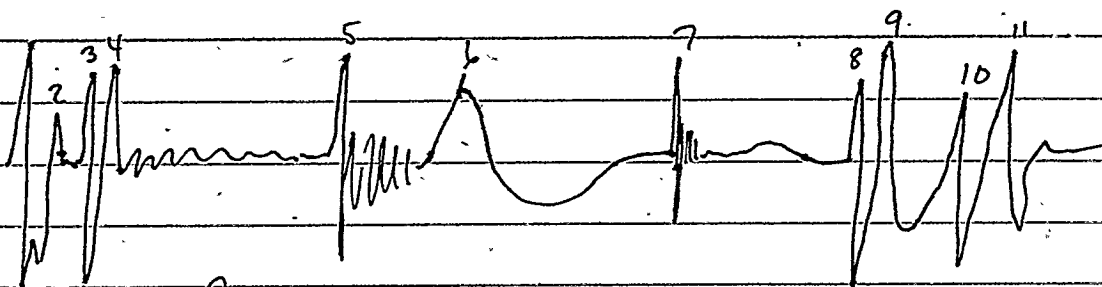
Transient #22:



2nd peak	at	.0024	second
3rd	" "	.0036	" "
4th	" "	.0046	" "
5th	" "	.0062	" "
6th	" "	.0064	" "
7th	" "	.0976	" "
8th	" "	.0988	" "
9th	" "	.0998	" "
10th	" "	.1002	" "

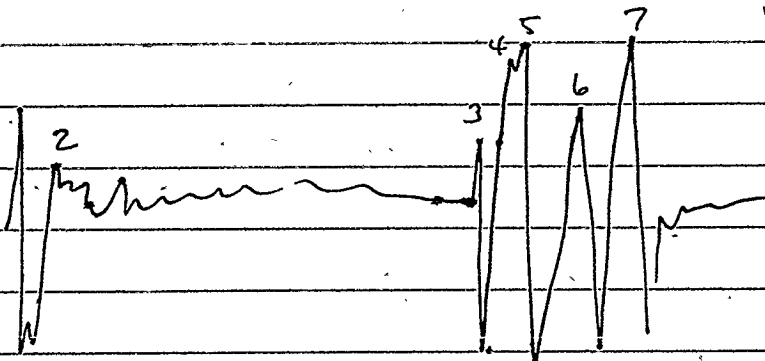
Waldst

Transient 23:



Peak	Time (seconds)
2nd peak	at .0026 second
3rd "	" .0046 "
4th "	" .0066 "
5th "	" .0294 .0294 "
6th "	" .0388 "
7th "	" .0758 "
8th "	" .0988 "
9th "	" .1014 "
10th "	" .1060 "
11th "	" .1088 "

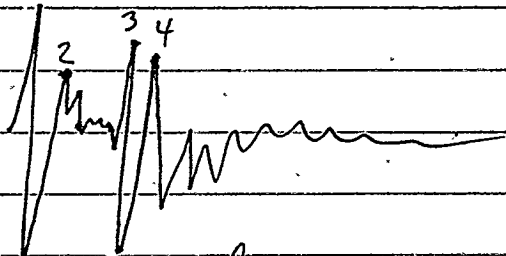
Transient # ~~24~~ 25:



Peak	Time (seconds)
2nd peak	at .0028 second
3rd "	" .0866 "
4th "	" .0894 "
5th "	" .0898 "
6th "	" .0936 "
7th "	" .0962 "

Worksheet

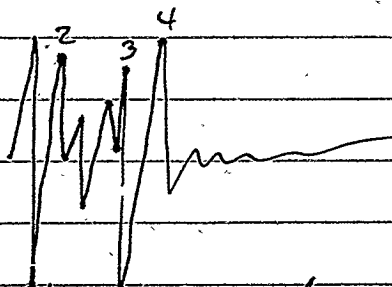
Transient #26:



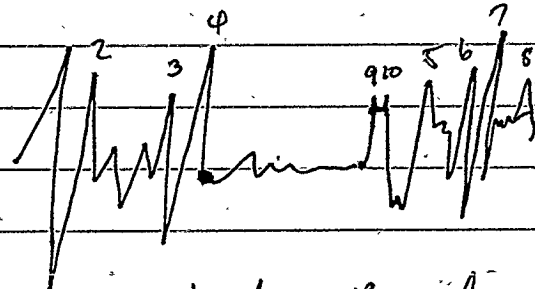
2nd peak at .0022 second
 3rd " " .0060 "
 4th " " .0082 "

(28)

Transient #27:



2nd peak at .0018 second
 3rd " " .0062 second
 4th " " .0084 second

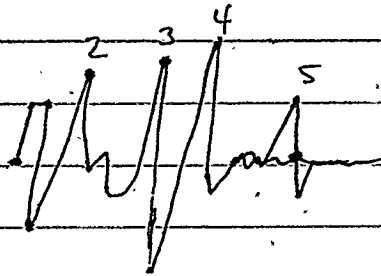


2nd peak at .0018 second
 3rd " " .0062 "
 4th " " .0084 "
 5th " " .0954 "
~~1000~~
 6th " " .1000 "
 7th " " .1028 "
 8th " " .1082 "
 9th " " .0928 "
 10th " " .0932 "

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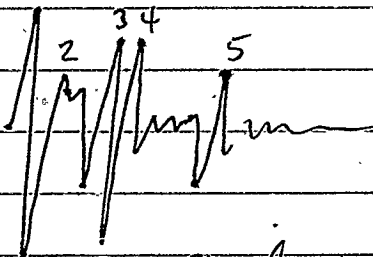
Worksheet

Transient #28:



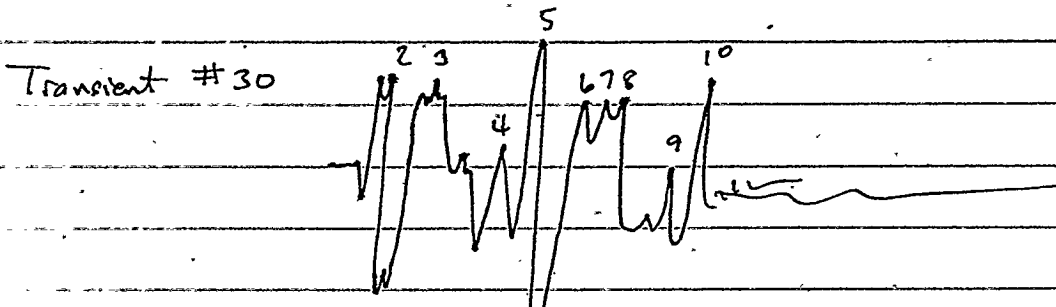
2nd peak at	.0030
3rd " "	.0074
4th " "	.0102 .0102
5th " "	.0156

Transient #29:

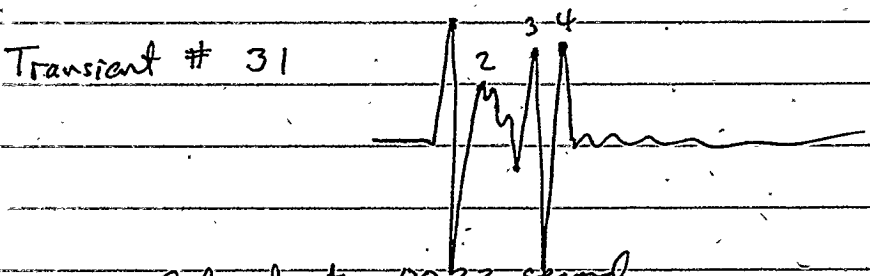


2nd peak at	.0022	second
3rd " "	.0060	"
4th " "	.0080	"
5th " "	.0134 .0134	"

Worksheet



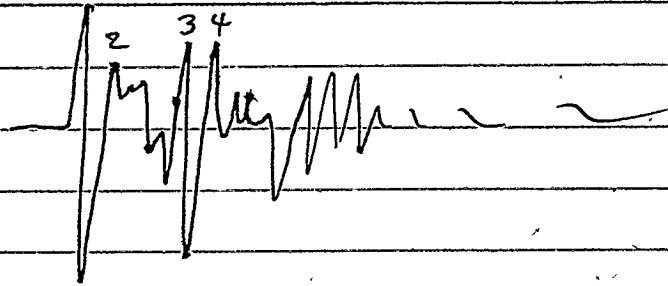
2nd peak at	.0004	second	
3rd	''	.0026	second
4th	''	.0060	''
5th	''	.0074	''
6th	''	.0094	''
7th	''	.0102	''
8th	''	.0110	''
9th	''	.0132	''
10th	''	.0148	''



2nd peak at	.0022	second
3rd peak at	.0058	''
4th peak at	.0076	''

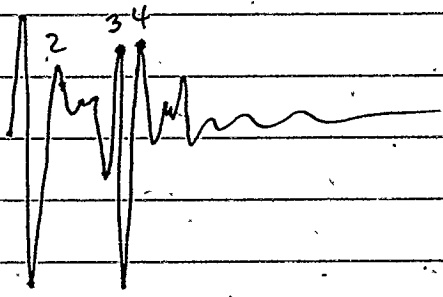
Worksheet

Transient 32:



2nd peak at .0022 second
3rd " " .0058 "
4th peak a .0078 "

Transient 33:

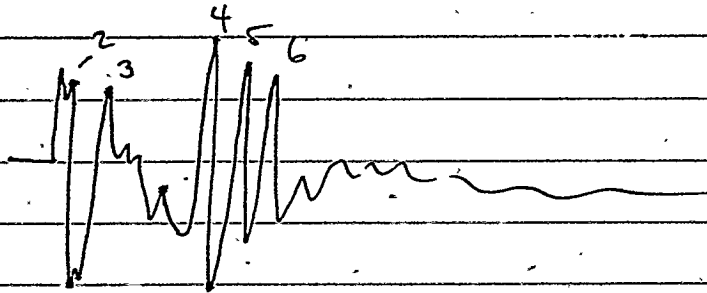


2nd peak at .0022 second
3rd peak at .0060 second
4th peak at .0082 "

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Channel 11.

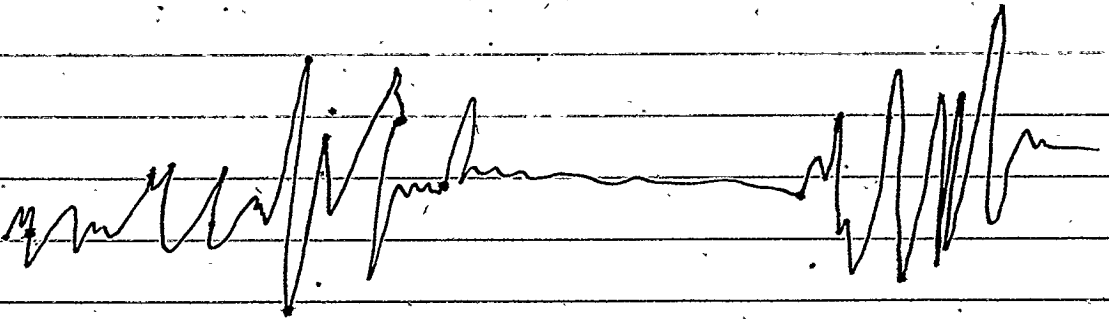
Worksheet

Transient # 34:



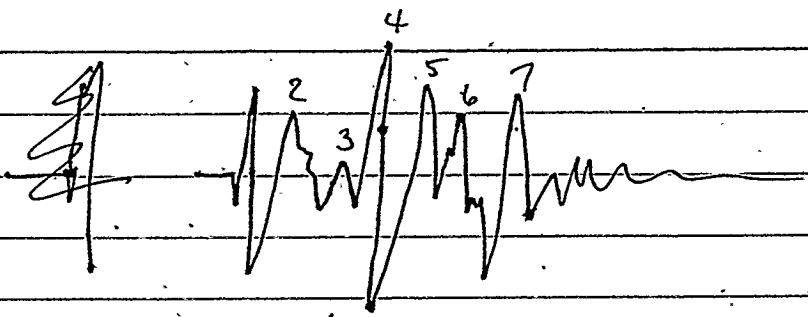
2nd peak at	.0006	second
3rd " " "	.0024	" "
4th " " "	.0074	" "
5th " " "	.0094	" "
6th " " "	.0112	" "

Transient # 35:



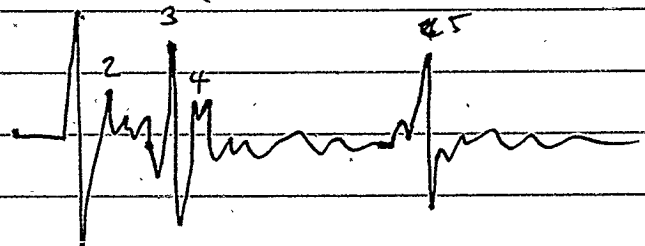
Worksheet

Transient # 36



2nd peak	at	.0024	second
3rd	"	.0062	"
4th	"	.0076	"
5th	"	.0090	"
6th	"	.0106	"
7th	"	.0134	"

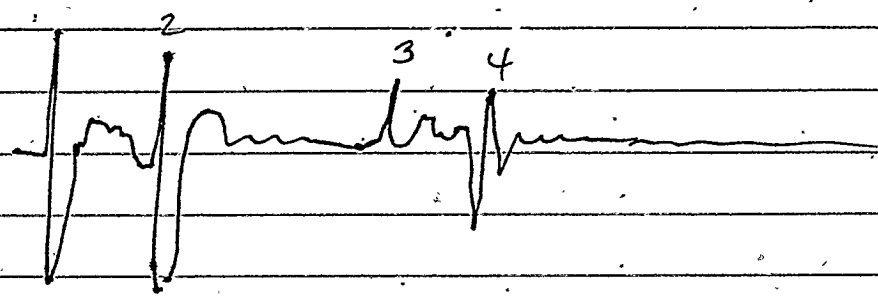
Transient #37



2nd peak	at	.0022	second
3rd	"	.0058	"
4th	"	.0076	"
5th	"	.0288	"

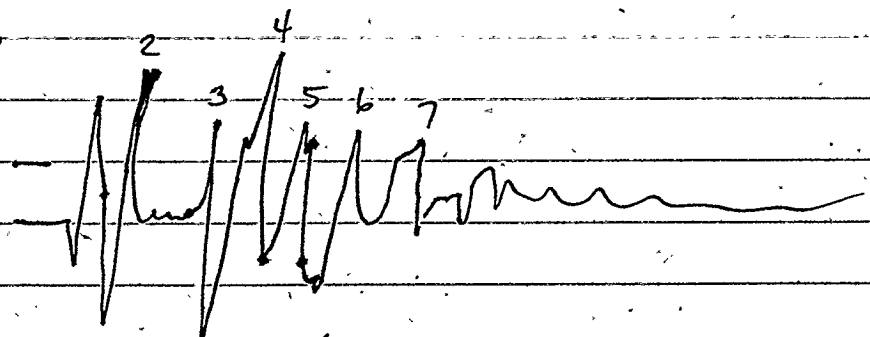
Worksheet

Transient #38:



2nd peak at .0060 second
3rd " " .0226 "
4th " " .0288 "

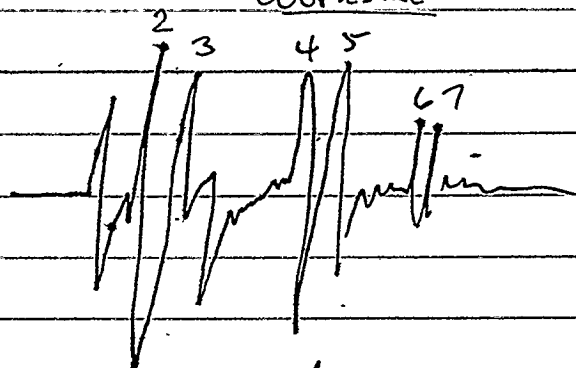
Transient #39



2nd peak at .0026 second
3rd " " .0074 "
4th " " .0102 "
5th " " .0124 "
6th " " .0152 "
7th " " .0186 "

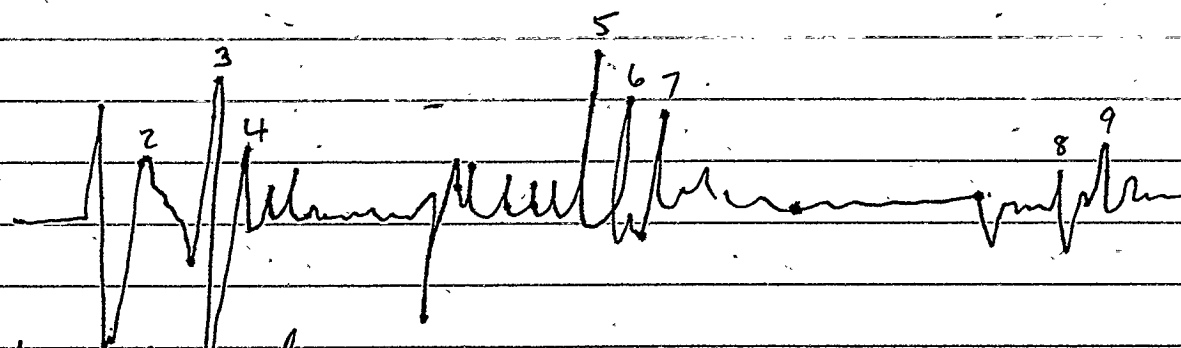
Worksheet

Transient #40



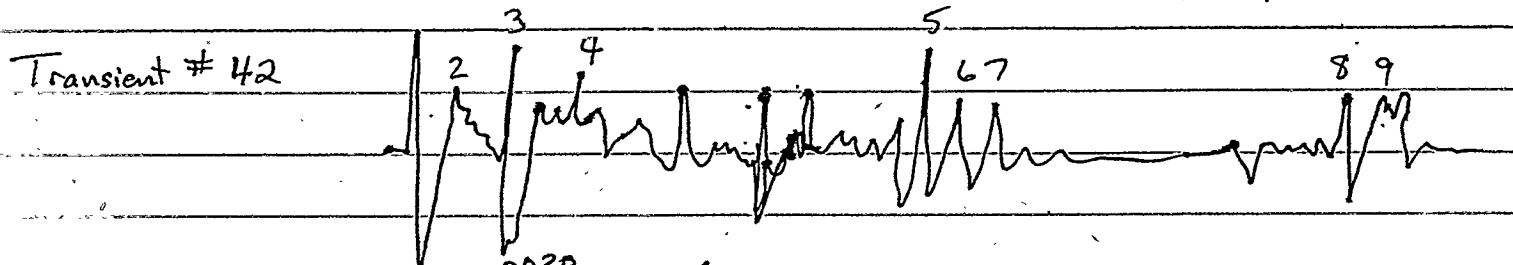
2nd peak	at	.0024	second
3rd peak	at	.0040	"
4th "	"	.0090	"
5th "	"	.0108	"
6th "	"	.0142	"
7th "	"	.0152	"

Transient #41

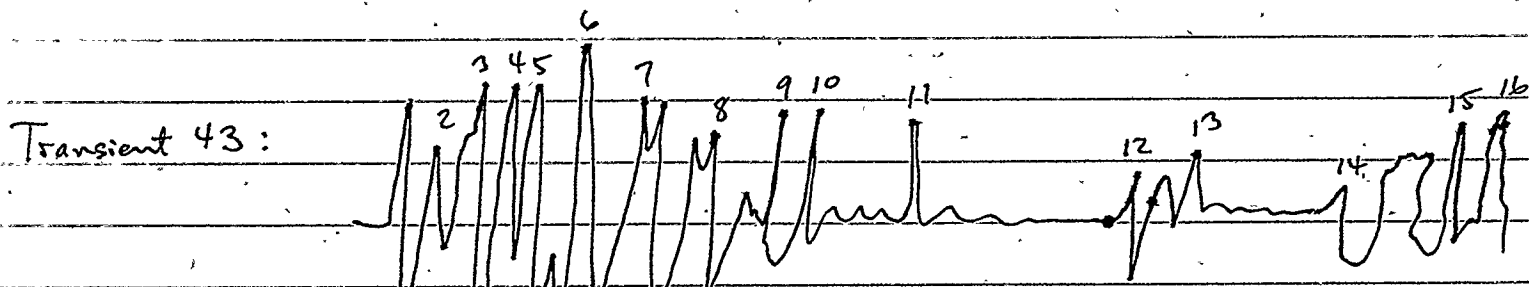


2nd peak	at	.0018	second
3rd "	"	.0060	"
4th "	"	.0078	"
5th "	"	.0272	"
6th "	"	.0294	"
7th "	"	.0324	"
8th "	"	.1246	"
9th "	"	.1270	"

Worksheet



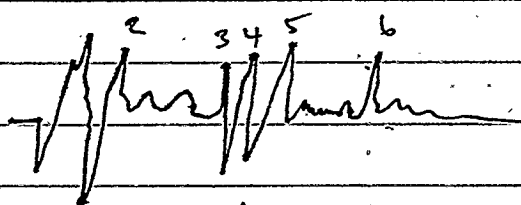
Peak	Time (seconds)
2nd peak	at .0020 second
3rd	" " .0060 "
4th	" " .0086 "
5th	" " .0272 "
6th	" " .0298 "
7th	" " .0326 "
8th	" " .1258 "
9th	" " .1284 "



Peak	Time (seconds)
2nd peak	at .0018 second
3rd	" " .0036 "
4th	" " .0056 "
5th	" " .0068 "
6th	" " .0084 "
7th	" " .0094 "
8th	" " .0126 "
9th	" " .0158 "
10th	" " .0184 "
11th	" " .0254 "
12th	" " .0690 "
13th	" " .0716 "
14th	" " .1046 "
15th	" " .1118 "
16th	" " .1146 "

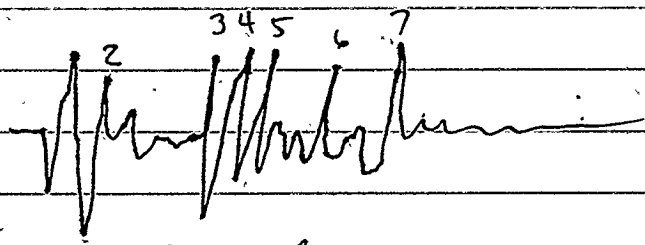
Worksheet

Transient #44:



2nd peak at	.0018	second
3rd " "	.0074	" "
4th " "	.0092	" "
5th " "	.0106	" "
6th " "	.0140	" "

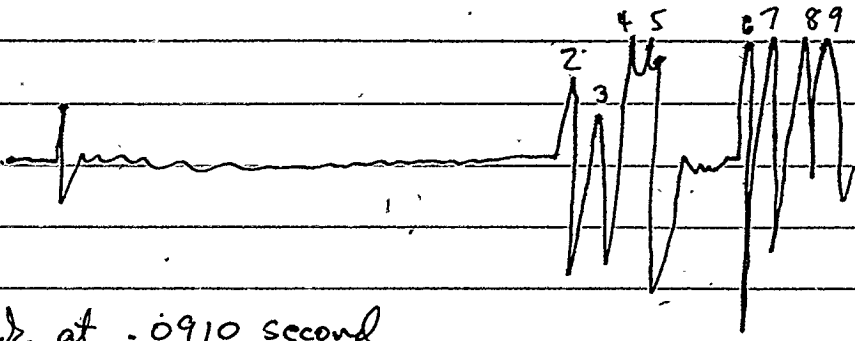
Transient #45



2nd peak at	.0018	second
3rd " "	.0072	" "
4th " "	.0088	" "
5th " "	.0100	" "
6th " "	.0136	" "
7th " "	.0174	" "

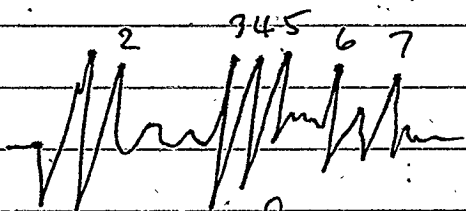
Woodslett

Transient #46



2nd peak at	.0910	second
3rd	.0922	"
4th	.0936	"
5th	.0940	"
6th	.0978	"
7th	.0988	"
8th	.1004	"
9th	.1014	"

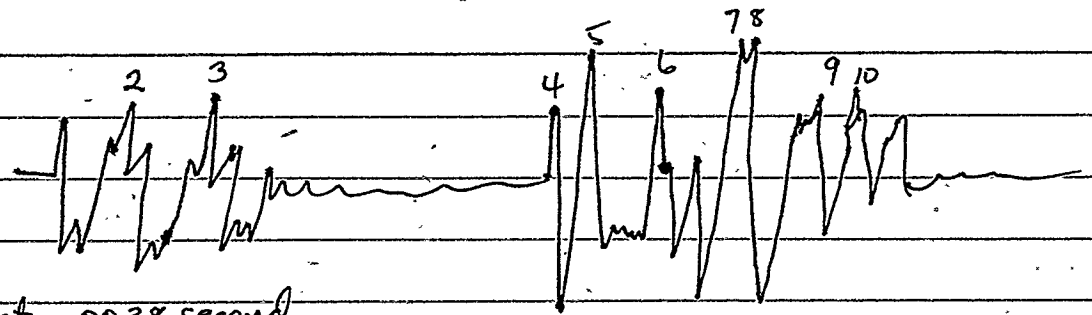
Transient #47



2nd peak at	.0018	second
3rd	.0074	"
4th	.0090	"
5th	.0104	"
6th	.0138	"
7th	.0176	"

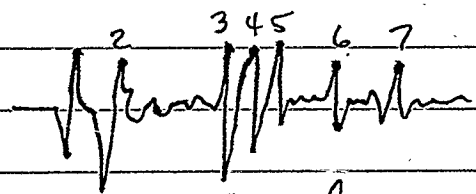
Worksheet

Transient #48:



2nd peak at	.0038	second
3rd " "	.0096	" "
4th " "	.0878	" "
5th " "	.0910	" "
6th " "	.0946	" "
7th " "	.0972	" "
8th " "	.0980	" "
9th " "	.1012	" "
10th " "	.1038	" "

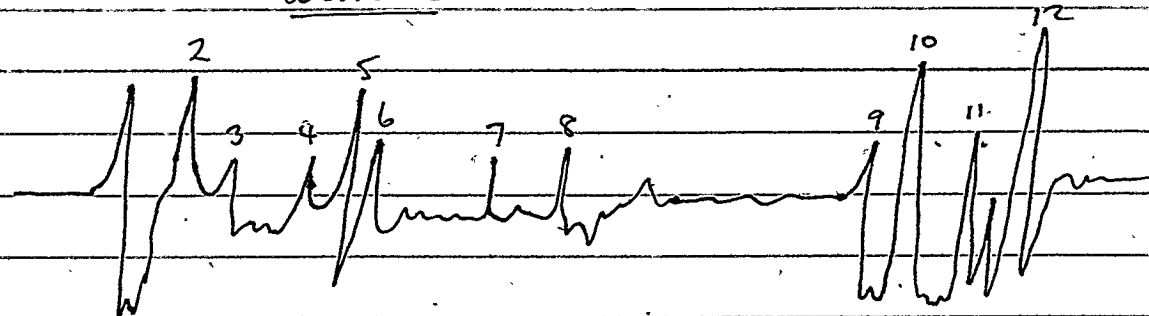
Transient #49



2nd peak at	.0018	second
3rd peak at	.0074	" "
4th " "	.0092	" "
5th " "	.0106	" "
6th " "	.0140	" "
7th " "	.0180	" "

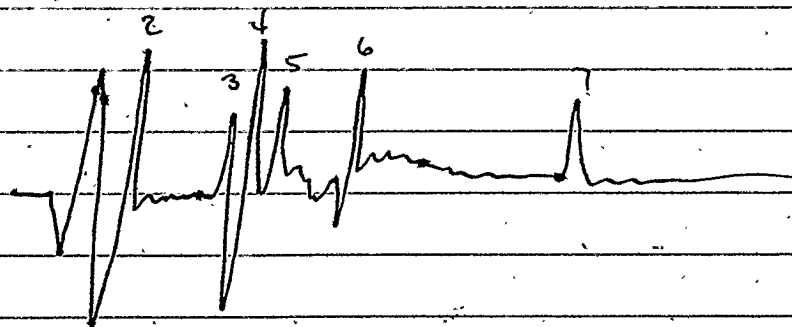
Worksheet

Transient # 50



2nd peak at .0030 second
3rd " " .0054 "
4th " " .0090 "
5th " " .0102 "
6th " " .0118 "
7th " " .0186 "
8th " " .0226 "
9th " " .0888 "
10th " " .0920 "
11th " " .0958 "
12th " " .0984 "

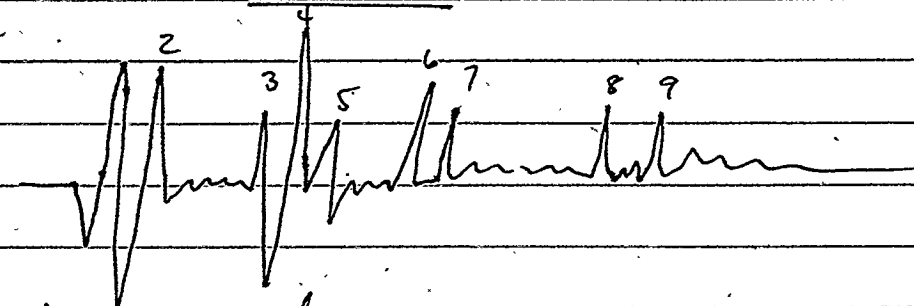
Transient # 51



2nd peak at .0020 second
3rd " " .0074 "
4th " " .0092 "
5th " " .0106 "
6th " " .0142 "
7th " " .0314 "

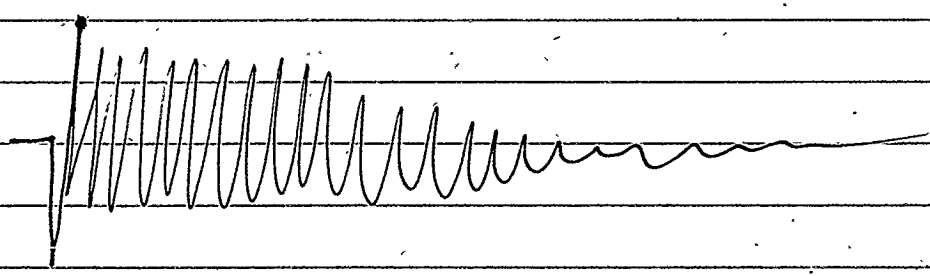
Worksheet

Transient # 52:



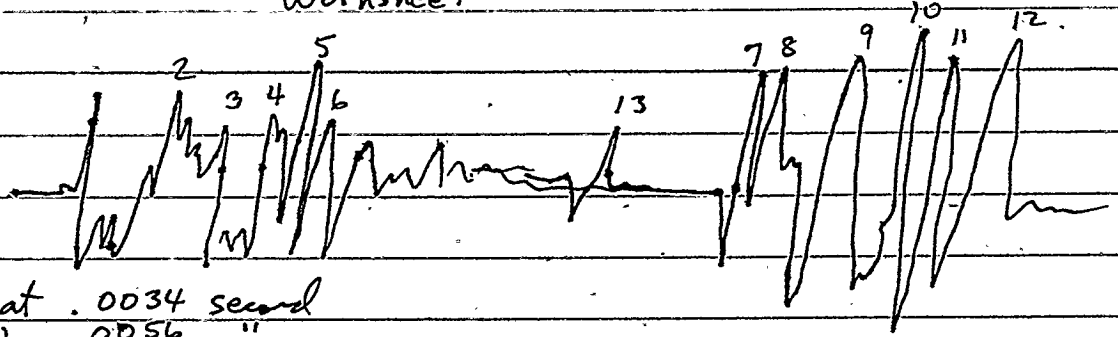
2nd peak at	.0022	second
3rd " "	.0076	" "
4th " "	.0094	" "
5th " "	.0110	" "
6th " "	.0146	" "
7th " "	.0166	" "
8th " "	.0288	" "
9th " "	.0218 .0314	" "

Transient # 53



Worksheet

Transient # 54



2nd peak at	.0034	second
3rd	.0056	"
4th	.0086	"
5th	.0106	"
6th	.0116	"
7th	.0892	"
8th	.0900	"
9th	.0930	"
10th	.0962	"
11th	.0970	"
12th	.0990	"
13th	.0656	second

TRANS. #	VIDEO TIME (Slow Mo)	VIDEO INFORMATION	VISICORDER TIME (Sec)	VISICORDER INFORMATION	AURAL
1	11:21:29	B/M (bearded with white hat, brown leather-like coat) hits a black vinyl/yellow Ford LTD with a steel in right hand. Numerous strikes under left arm.	00.000	Short duration transient sound - doesn't look like a gunshot	Not a sharp transient - sounds like one fairly flat surface hitting another (probably one surface is sheet metal) A thud sound.
2	11:28:12	See blue smoke near blue hard hat of W/M wearing black & white check coat in center of screen	06.302	Very sharp transient - looks like a gunshot with a low low ^{level} echo at .05 seconds	Sharp transient - sounds like a gunshot with ^{some} echo *
3	11:30:12	Nothing seen happening that could cause transient - mostly backs of people	08.150	Very sharp ^{dull} transient - may not be a gunshot with a low level echo at .05 seconds	Sounds like a muffled sharp sound - may be a gunshot _____
4	11:35:20	Picture blurred	13.250	Low amplitude transient - doesn't look like a gunshot	Sounds like video equipment being bumped.
5	11:37:21- 11:38:10	Picture blurred at first then clears showing a view down street	15.770- 16.370	Several transients - doesn't look like gunshots	Sounds like is squeaking sounds coming from handling of video equipment.

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME (Seconds)	VISICORDER INFORMATION	AURAL
6	11:43:10	View down street with a W/M having a gun in his hand	20.682	Dull, low amplitude transient - doesn't look like a gunshot	Sounds like a wooden stick hitting an object. Doesn't be sound like a gunshot.
7	11:44:20	Same as #6	22.094	Same as #6 except slightly higher in amplitude	Sounds like a car door slamming. Doesn't sound like a gunshot
8	11:45:13	Same as #6	22.974	Very sharp transient but no echo pattern - doesn't look like a gunshot	Sounds like the microphone on the video equipment was tapped. Doesn't sound like a gunshot.
9	11:48:10	Same as #6	25.906	Sharp transient with short echo pattern - can't determine if a gunshot or not	Sounds like a wooden stick hitting an object. Doesn't sound like a gunshot.
10	11:48:22	Same as #6	26.242	Same as #6 #6	Sounds like a wooden stick hitting the pavement. Doesn't sound like a gunshot.

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME (Seconds)	VISICORDER INFORMATION	AURAL
11	11:48:24	Same as #6	26.294	Same as #6	Same as #10
12	11:49:15	Picture blurred	26.746	Same as #6	Same as #9
13	11:50:25	Stick fight going on near pick-up truck with camper	28.286	Very sharp transient with echo. Looks like a gunshot with the main echo about .06 seconds later	Sounds like a gunshot with echo *
14	11:54:20	Blurred pictures of cars	32.086	Two transients - first is dull, low amplitude, second is like #8	Same as #8
15	11:54:28	Same as #14	32.354	Very sharp transient with echo pattern. Looks like a gunshot with the main echo about .06 seconds later	Sounds like a gunshot with echo. *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME (seconds)	VISICORDER INFORMATION	AURAL
16	11:55:14	Blurred picture of car windshield	32.670	Semi-sharp, low amplitude transient. Doesn't look like a gunshot	Same as #5
17	11:55:20	Same as #16	33.078	Very sharp transient with echo pattern. Looks like a gunshot with the main echo about .04 seconds later	Sounds like a gunshot with echo *
18	12:00:03	View of back windows of a parked car and down the street	37.418	Very sharp transient with very low level echo pattern. Looks like a gunshot.	Sounds like a gunshot *
19	12:11:14	View of a W/M standing next to pick-up truck with camper	48.646	Very sharp transient with high level echo pattern. Looks like a gunshot with main echo about .09 second later	Sounds like a gunshot with strong echo pattern *
20	12:12:02	Picture blurred of grass and pavement	49.166	Very sharp transient with high level echo pattern. Looks like a gunshot with main echo about .09 seconds later	Sounds like a gunshot with strong echo pattern *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME (Seconds)	VISICORDER INFORMATION	AURAL
21	12:12:14	Picture blurred	49.776	Very sharp transient with high level echo pattern. Looks like a gunshot with main echo about .09 seconds later	Sounds like a gunshot with strong echo pattern. *
22	12:12:16	Picture blurred	49.838	Same as # 21	Same as # 21 *
23	12:13:15	W/M's near a Blue Ford Fairlane and tan Van and a W/M (white sweater or shirt, dark trousers, bearded) is seen firing a shoulder weapon from right shoulder	50.906	Very sharp transient with high level echo pattern and other transient information. Looks like a gunshot with various echos.	Sounds like a gunshot with strong echo pattern and movement of video equipment. *
24	12:13:27	Same as # 23 - shot except no one seen shooting	51.322	Transient sound with no echo. Doesn't look like a gunshot.	Sounds like movement of video equipment. Doesn't sound like a gunshot
25	12:18:00	W/M's near a blue Ford Fairlane and a tan van with weapons. A W/M (red/white baseball hat) is shooting a shoulder weapon left handed behind van	55.162	Very sharp transient with high level echo pattern. Looks like a gunshot with the main echo about .09 seconds later.	Sounds like a gunshot with a strong echo pattern. *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME (Seconds)	VISICORDER INFORMATION	AURAL
26	12:19:26	Picture blurred but w/m (Blue jeans top & bottom, receding hair line) is seen running right to left on sidewalk with a handgun in each hand	56.992	Very sharp transient with minimum echo pattern. Looks like a gunshot with main echo about .02 seconds later	Sounds like a gunshot with limited echo *
27	12:20:04	Same as #26 except not blurred	57.262	Same as #26	Same as #26 *
28	12:20:06	Same as #27	57.366	Very sharp transient with minimum echo pattern. Looks like a gunshot with no main echo.	Same as #26 Sounds like an echo from #27 or a separate gunshot - cannot determine *
29	12:20:09	Same as # 26 27	57.384	Same as #28	Same as #26 *
30	12:20:16	Same as # 26 27 except w/m is seen shooting a handgun in his right hand	57.740	Same as #28	Same as #26 *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
31	12:21:16	Same as #25 ²⁷ except a W/F in a yellow raincoat in shadows pointing a pistol in right hand in direction of W/M. W/M may have fired handgun in right hand	58.586	Very sharp transient with a limited echo pattern. Looks like a gunshot with the main echo .03 seconds later	Same as #26 *
32	12:21:21	Same as #27 except a W/F in a yellow raincoat in shadows is seen shooting a handgun in right hand in direction of W/M	58.932	Same as #31	Same as #26 *
33	12:22:10	W/M with handgun (Blue jean top & bottom) and W/F in yellow raincoat seen with handguns near pick-up with camper top	59.358	Very sharp transient with limited echo pattern. Looks like a gunshot.	Same as #26 *
34	12:22:14	Same as #33 except the W/M is seen shooting handgun in left hand	59.576	Same as #33	Same as #26 *
35	12:23:26	W/M (Blue jean top & bottom) seen running left to right	60.838	Sharp transient with considerable echo pattern. Looks like a gunshot with main echos about .09 seconds later	Same as #26 except sounds like a shotgun and has a high amplitude echo pattern *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
36	12:24:23	Blurred picture of # 35	61.728	Fairly sharp transient with limited echo pattern. Looks like a gunshot.	Same as #26 except sounds like a small caliber weapon *
37	12:27:24	View near pick-up truck with camper with 6 W/M's seen	64.684	Very sharp transient with echo pattern. Looks like a gunshot with the main echo .03 seconds later.	Sounds like a gunshot with echo pattern following. *
38	12:28:20	Same as #37 except 5 W/M's	65.536	Same as #37	Same as #37 *
39	12:28:25	Same as #38	65.792	Very sharp transient with a decaying echo pattern. Looks like a gunshot.	Same as #37 *
40	12:30:05	Picture blurred	67.040	Very sharp transient with limited echo pattern. Looks like a gunshot.	Sounds like a gunshot with limited echo. *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
41	12:30:17	Picture blurred	67.388	Very sharp transient with considerable echo pattern. Looks like a gunshot with main echo .03 and .13 seconds later	Same as # 37 *
42	12:31:00	W/M (shoulder length hair, tall, large frame, blue-jean outfit) seen firing on right shoulder a shoulder weapon with banana clip next to left front on Ford Fairlane	68.074	Same as # 41 41	Same as # 41 *
43	12:31:17	W/M's seen around Ford Fairlane and van	68.398	Transient with considerable echo pattern. Looks like a gunshot with main echo .11 seconds later.	Same as # 37 *
44	12:31:28	Same as # 43	68.676	Low amplitude transient with limited echo pattern. Probable gunshot	Same as # 40 *
45	12:33:13	Same as # 43	70.194	Same as # 44	Same as # 40 *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
46	12:33:26	Same as #43 except w/m (red and white baseball cap) is seen slinging a shoulder weapon behind right side of van	70.930	Low level but sharp transient followed by high amplitude echo. Looks like a muffled gunshot followed by a high level echo. 0.8 second later	Sounds like original gunshot blast is muffled followed by a sharp echo. A gunshot. (Possibly a shotgun)
47	12:35:06	Same as #43	71.996	Same as #44	Same as #40
48	12:36:03	Same as #43 except w/m in #46 may have fired shoulder weapon	72.990	Same as #46	Same as #46
49	12:36:15	Same as #43	73.230	Same as #44	Same as #40
50	12:45:06	W/F in yellow raincoat in upper left corner and w/m in brown coat on ground in center	81.772	Same as #46	Same as #46

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
51	12:51:23	Same as #43	88.270	Very sharp transient with echo pattern. Looks like a gunshot with main echo .03 second later.	Sounds like a gunshot with echo. *
52	12:55:03	Picture blurred	91.606	Same as #51	Same as #51 *
53	12:55:21	Picture blurred	92.204	Very sharp transient that over loads system causing high level decay-echo pattern. Looks like a gunshot very close.	Sounds like a gunshot very near microphone causing distortion. *
54	12:56:23	Picture blurred	93.274	Same as #46	Same as #46 *
55	12:57:21- 12:59:18	Picture blurred	94.154- 96.114	Very Fairly sharp transient follow by dull transients. Probably not a gunshot	Sounds like movement of video equipment - not a gunshot

I

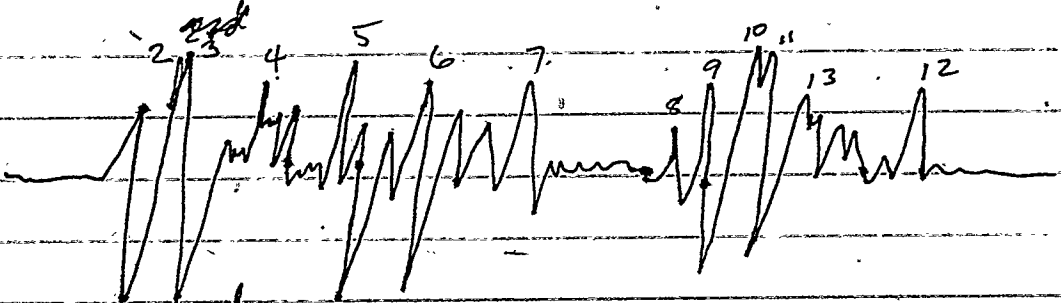
COMPLETED
RECORDERS
1976

JAN - SEPT

102 Box 4

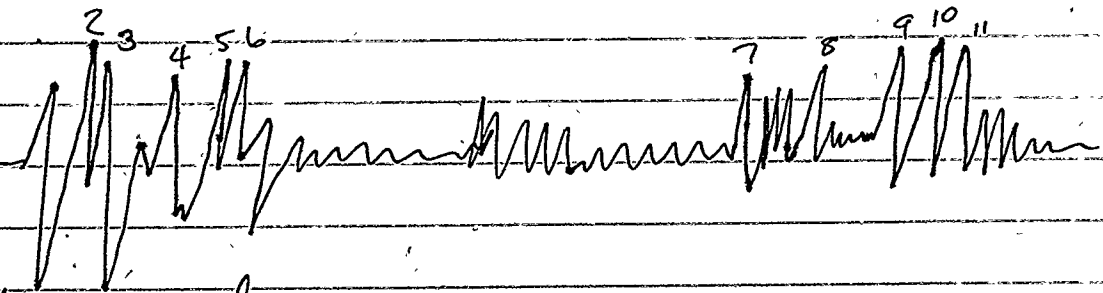
Worksheet

Transient # 5



2nd peak at	.0038	second
3rd "	.0042	"
4th "	.0098	"
5th "	.0146	"
6th "	.0212	"
7th "	.0302	"
8th "	.0528	"
9th "	.0562	"
10th "	.0590	"
11th "	.0596	"
12th "	.0762	"
13th "	.0642	"

Transient # 7

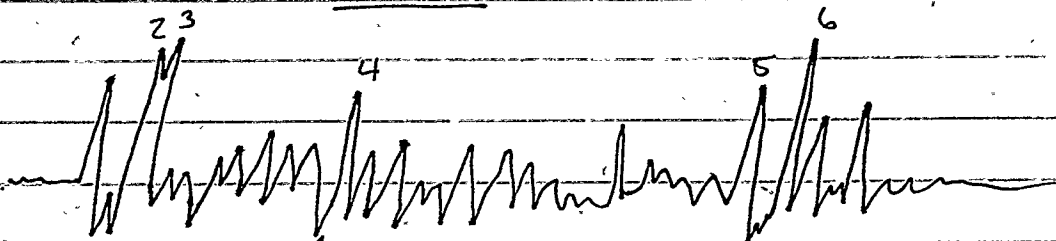


2nd peak at	.0028	second
3rd "	.0036	"
4th "	.0076	"
5th "	.0098	"
6th "	.0108	"
7th "	.0516	"
8th "	.0562	"
9th "	.0618	"
10th "	.0642	"
11th "	.0658	"

00107007 E QZ
Channel 2
250 cm/sec

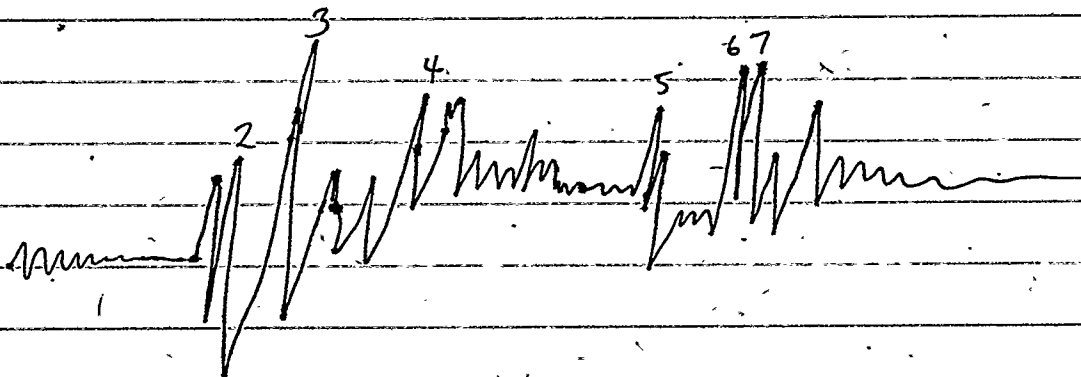
Worksheet

Transient #8



2nd peak at	.0028	second
3rd " "	.0034	" "
4th " "	.0170	" "
5th " "	.0516	" "
6th " "	.0540	" "

Transient #11

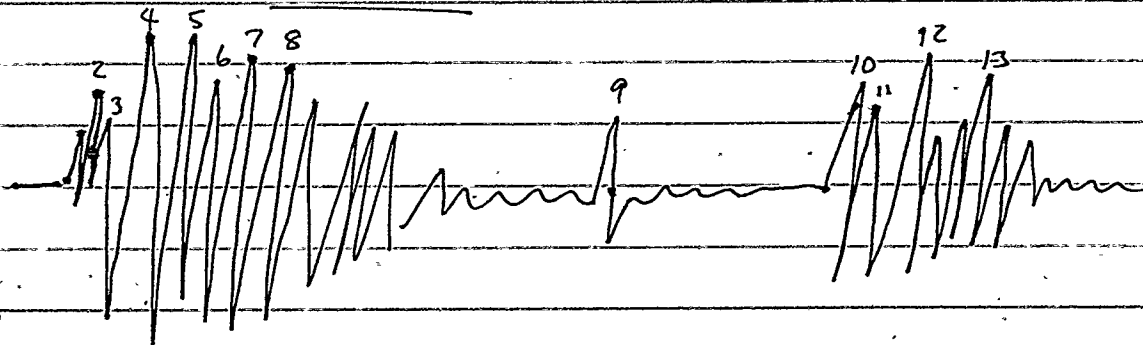


2nd peak at	.0006	second
3rd " "	.0030	" "
4th " "	.0084	" "
5th " "	.0244	" "
6th " "	.0280	" "
7th " "	.0288	" "

00107007 E QZ
 Channel Z
 250 cm/sec

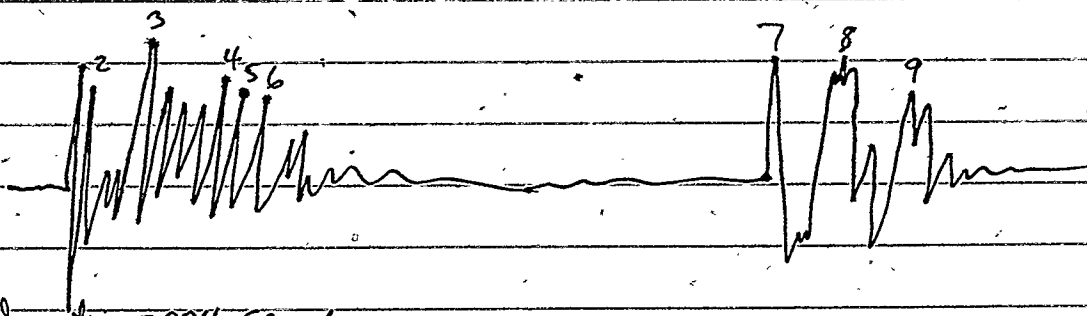
Worksheet

Transient # 15



2nd peak	at	.0004	second
3rd "	"	.0008	"
4th "	"	.0028	"
5th "	"	.0032	.0046 second
6th "	"	.0068	"
7th "	"	.0088	"
8th "	"	.0108	"
9th "	"	.0598	"
10th "	"	.0954	"
11th "	"	.0962	"
12th "	"	.0984	"
13th "	"	.1020	"

Transient # 16

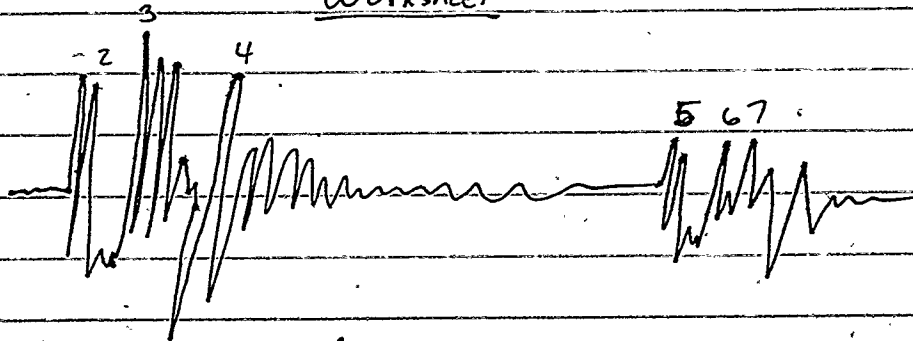


2nd peak	at	.0004	second
3rd "	"	.0020	"
4th "	"	.0066	"
5th "	"	.0076	"
6th "	"	.0110	"
7th "	"	.0960	"
8th "	"	.0988	"
9th "	"	.1036	"

00107007 E Q2
Channel 12
250 cm/sec

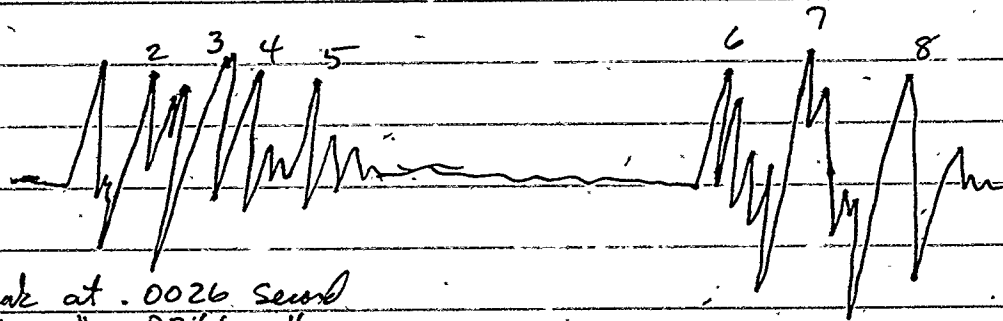
Worksheet

Transient #17



2nd	peak	at	.0006	second
3rd	"	"	.0022	"
4th	"	"	.0068	"
5th	"	"	.0962	"
6th	"	"	.0984	"
7th	"	"	.1000	"

Transient #18

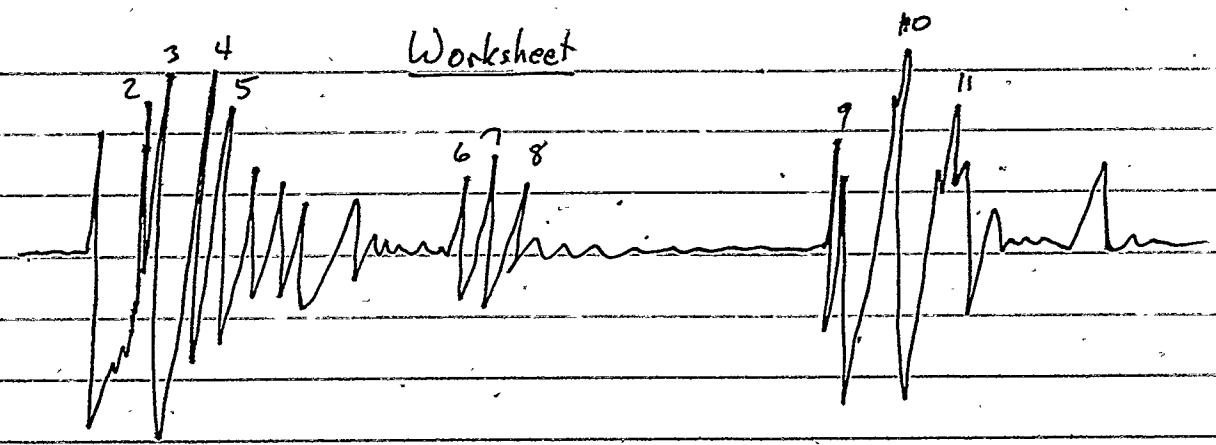


2nd	peak	at	.0026	second
3rd	"	"	.0066	"
4th	"	"	.0086	"
5th	"	"	.0126	"
6th	"	"	.0976	"
7th	"	"	.1002	"
8th	"	"	.1056	"

00107007 E QZ
 Channel 2
 250cm/sec

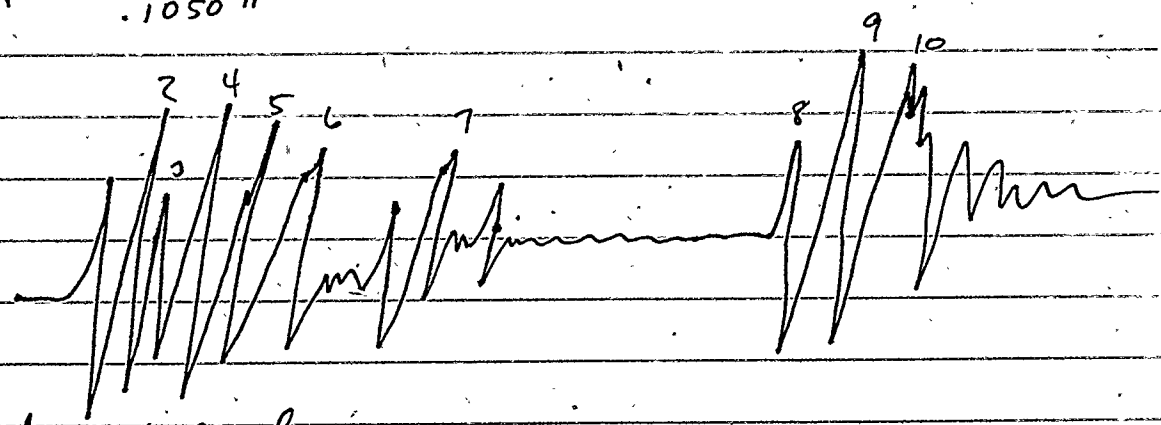
Worksheet

Transect #19 -



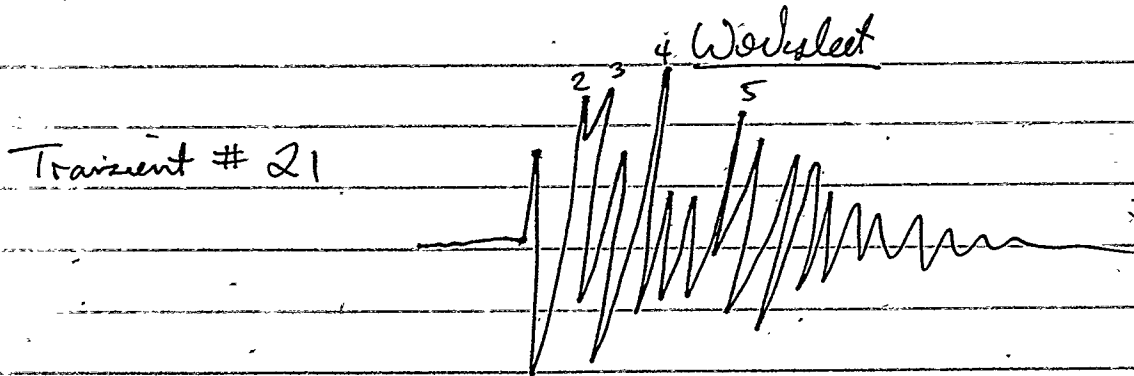
2 nd peak	at	.0024	second
3 rd	"	.0038	"
4 th	"	.0064	"
5 th	"	.0078	"
6 th	"	.0240	"
7 th	"	.0266	"
8 th	"	.0296	"
9 th	"	.0966	"
10 th	"	.0998	"
11 th	"	.1050	"

Transect #20

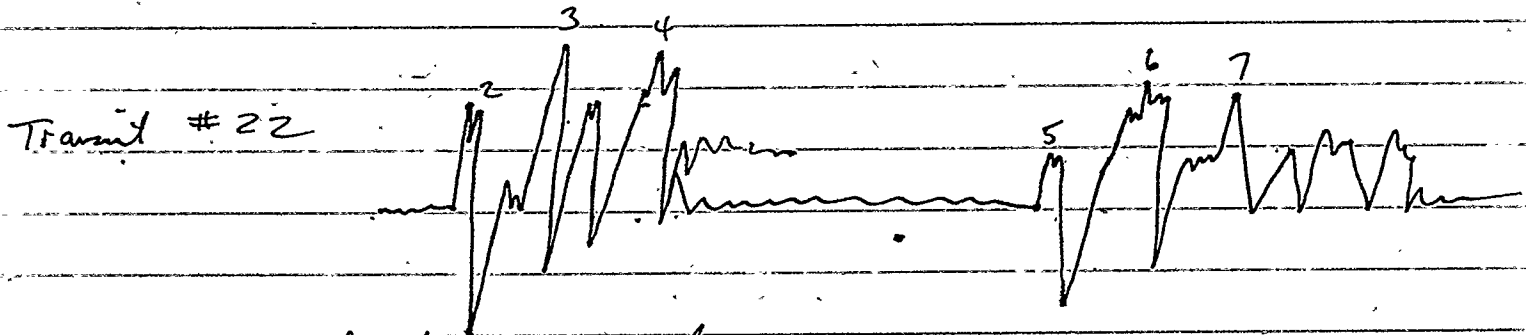


2 nd peak	at	.0040	second
3 rd	"	.0066	"
4 th	"	.0098	"
5 th	"	.0156	"
6 th	"	.0198	"
7 th	"	.0306	"
8 th	"	.0862	"
9 th	"	.0898	"
10 th	"	.0946	"

00107007 E. QZ
Channel 2
250 cm/sec



2nd peak at	.0032	second
3rd	"	" .0038 "
4th	"	" .0080 "
5th	"	" .0130 "



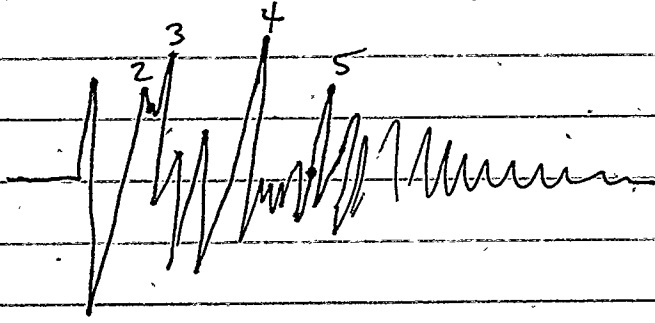
2nd peak at	.0004	second
3rd	"	" .0040 "
4th	"	" .0080 "
5th	"	" .0924 "
6th	"	" .0956 "
7th	"	" .1020 "

Transit # 23 - see # 22 also

00107007 E QZ
Channel 2
250 cm/sec

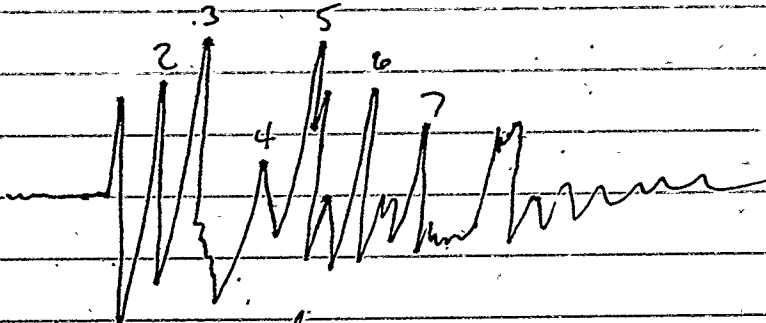
Worksheet

Transient #24



2nd peak	at	.0030	sec
3rd	"	.0038	"
4th	"	.0082	"
5th	"	.0134	"

Transient #25

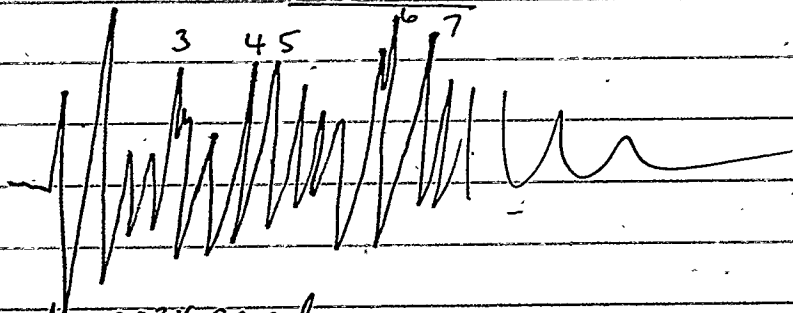


2nd peak	at	.0022	sec
3rd	"	.0038	"
4th	"	.0078	"
5th	"	.0092	"
6th	"	.0128	"
7th	"	.0172	"

00107007 E Q2
Channel 2
250 cm/sec

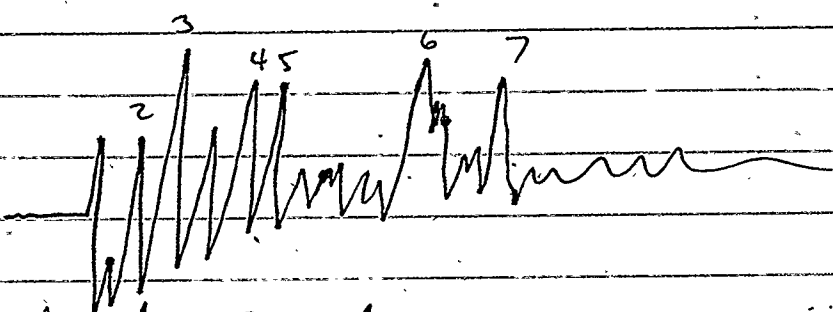
2 Worksheet

Transient # 26



2nd peak at	.0034 second
3rd " "	.0074 "
4th " "	.0124 "
5th " "	.0138 "
6th " "	.0244 "
7th " "	.0276 "

Transient # 27

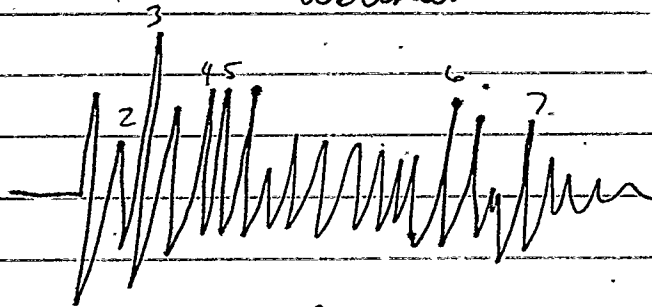


2nd peak at	.0020 second
3rd peak at	.0034 "
4th " "	.0076 "
5th " "	.0088 "
6th " "	.0250 "
7th " "	.0310 "

00107007 E QZ
Channel 2
250 cm/sec

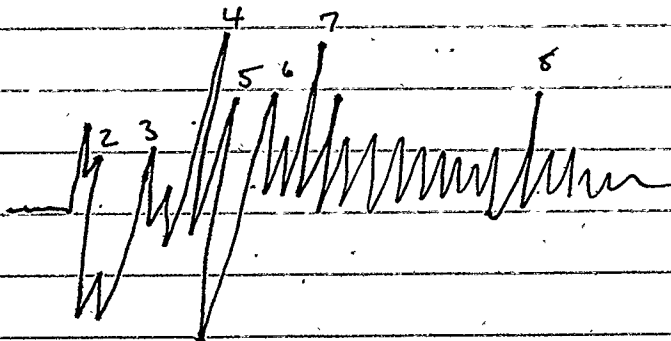
Worksteel

Transient # 28



2nd peak at	.0024	second
3rd " "	.0036	" "
4th " "	.0070	" "
5th " "	.0076	" "
6th " "	.0266	" "
7th " "	.0318	" "

Transient 29



2nd peak at	.0004	second
3rd " "	.0022	" "
4th " "	.0040	" "
5th " "	.0060	" "
6th " "	.0082	" "
7th " "	.0096	" "
8th " "	.0222	" "

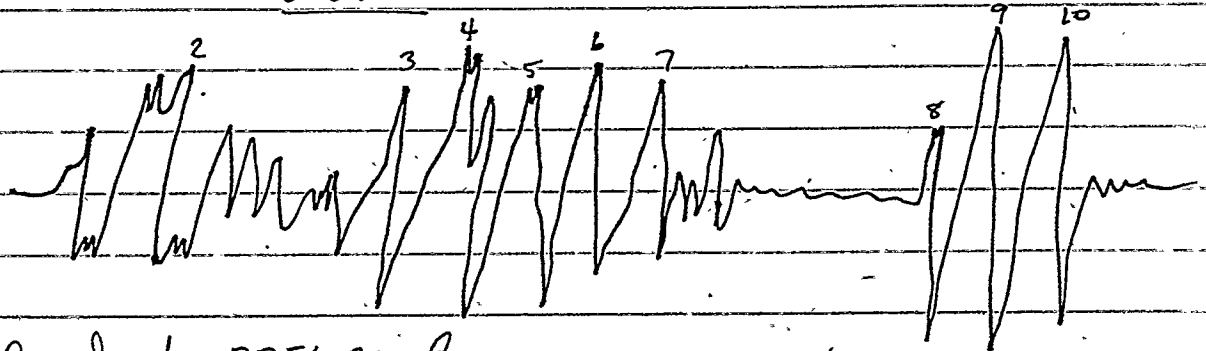
00107007 E QZ

Clam 2

250 cm/sec

Worksheet

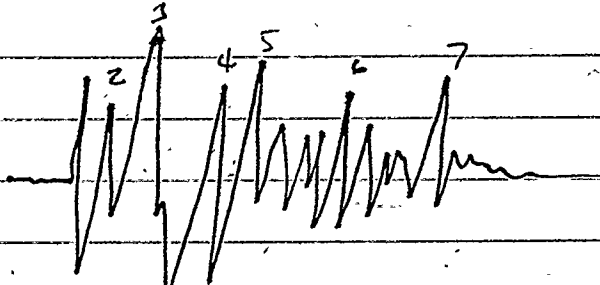
Transient #30



2nd peak at .0056 second

3rd	"	"	.0216	"
4th	"	"	.0258	"
5th	"	"	.0308	"
6th	"	"	.0364	"
7th	"	"	.0414	"
8th	"	"	.1024	"
9th	"	"	.1060	"
10th	"	"	.1116	"

Transient #31



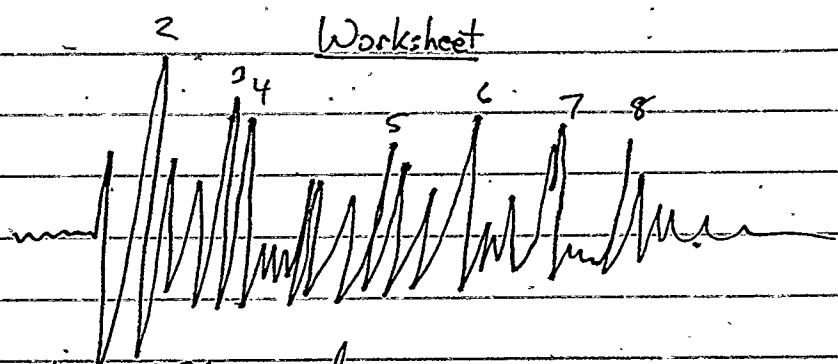
2nd peak at .0022 second

3rd	"	"	.0040	"
4th	"	"	.0060	"
5th	"	"	.0084	"
6th	"	"	.0138	"
7th	"	"	.0202	"

00107007 E QZ
 Channel 2
 250cm/sec

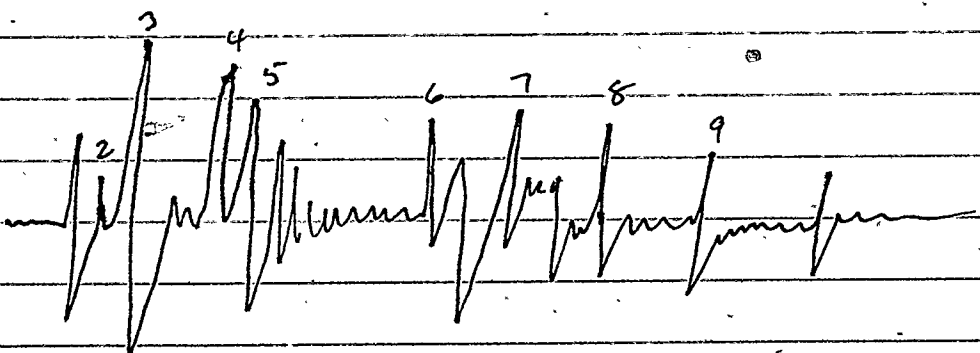
Worksheet

Transient #32



2nd peak at	.0036	second
3rd " "	.0076	" "
4th " "	.0086	" "
5th " "	.0178	" "
6th " "	.0234	" "
7th " "	.0294	" "
8th " "	.0336	" "

Transient #33

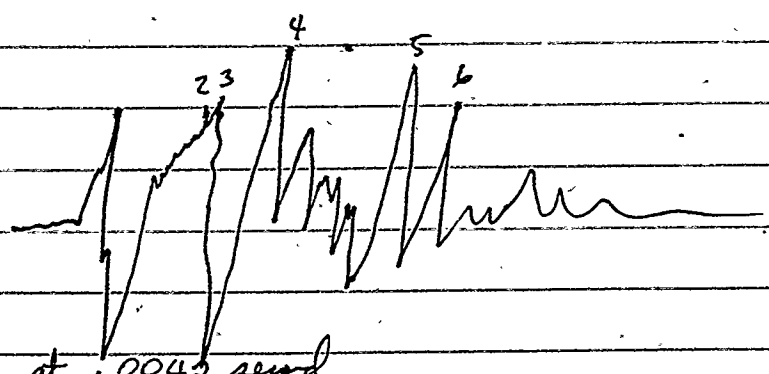


2nd peak at	.0022	second
3rd peak at	.0038	" "
4th " "	.0076	" "
5th " "	.0088	" "
6th " "	.0188	" "
7th " "	.0232	" "
8th " "	.0296	" "
9th " "	.0350	" "

00107007 EQZ
Channel 2
250 cm/sec

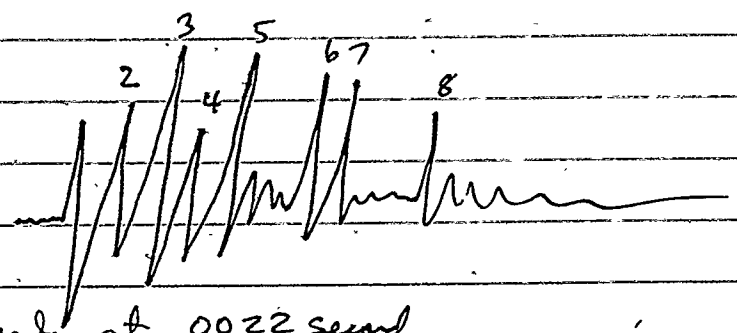
Worksheet

Transient # 34:



2nd peak at	.0042 second
3rd " "	.0048 "
4th " "	.0096 "
5th " "	.0178 "
6th " "	.0208 "

Transient # 35:

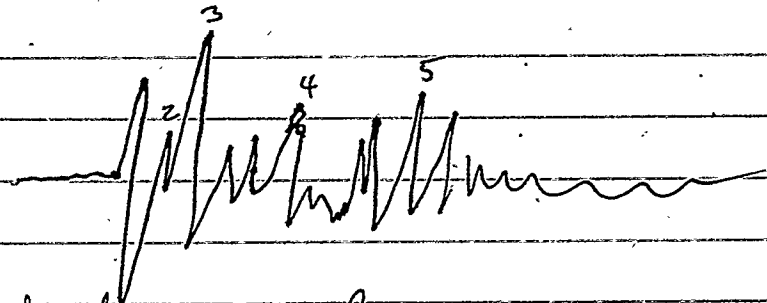


2nd peak at	.0022 second
3rd " "	.0042 "
4th " "	.0076 "
5th " "	.0090 "
6th " "	.0136 "
7th " "	.0156 "
8th " "	.0216 "

00107007 E QZ
Chanel 2
250 cm/sec

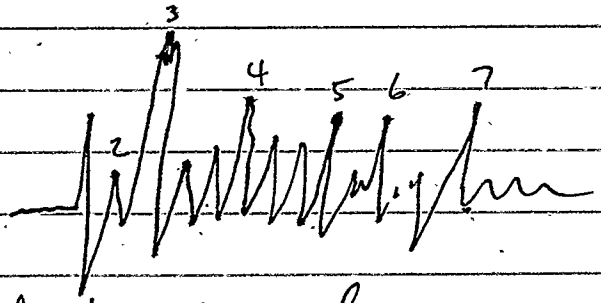
Worksheet

Transient #36



2nd	peak	at	.0022	second
3rd	"	"	.0038	"
4th	"	"	.0086	"
5th	"	"	.0148	"

Transient #37

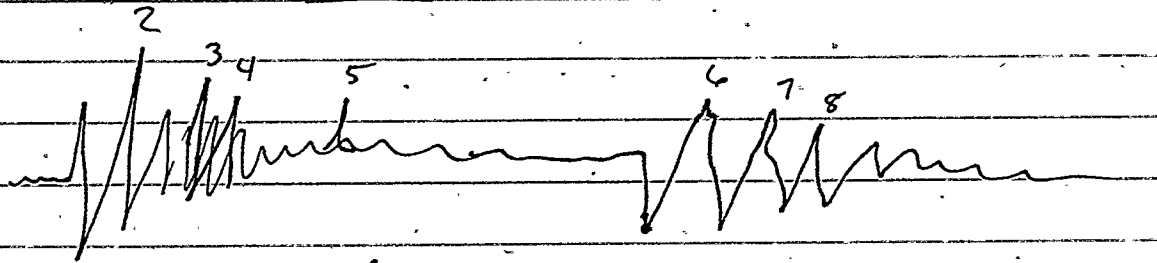


2nd	peak	at	.0022	second
3rd	"	"	.0036	"
4th	"	"	.0088	"
5th	"	"	.0150	"
6th	"	"	.0208	"
7th	"	"	.0268	"

00107007 E QZ
Channel 2
250 cm/sec

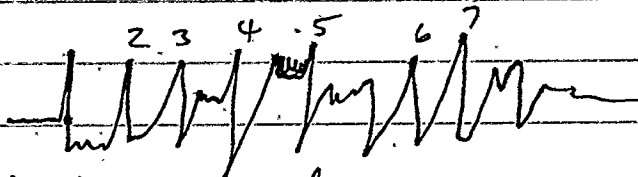
Worksheet

Transient # 38



2nd peak at	.0038	second
3rd	"	" .0100 "
4th	"	" .0128 "
5th	"	" .0258 "
6th	"	" .1064 "
7th	"	" .1116 "
8th	"	" .1162 "

Transit # 39

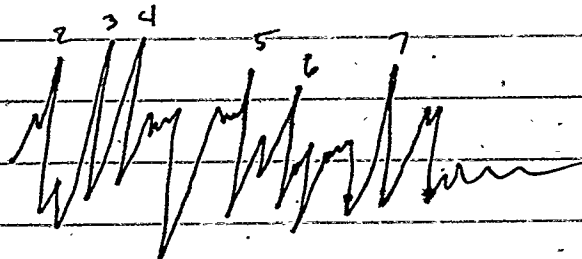


2nd peak at	.0024	second
3rd	"	" .0044 "
4th peak	"	" .0062 "
5th	"	" .0092 "
6th	"	" .0146 "
7th	"	" .0172 "

00107007 E QZ
Channel 2
250cm/sec

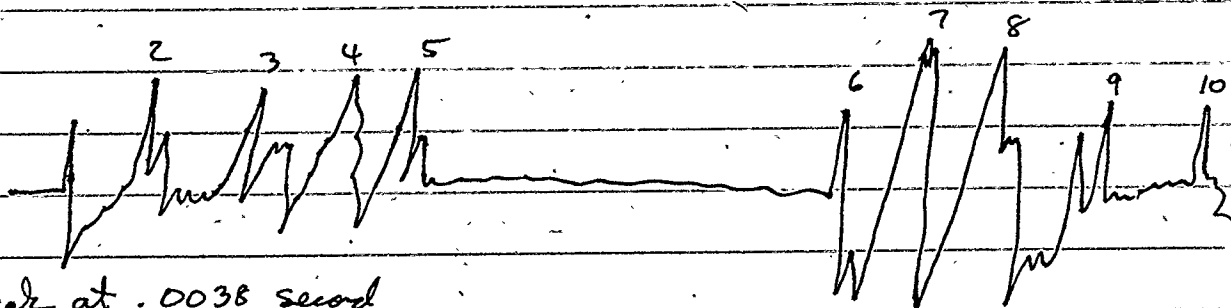
Woodpecker

Transient # 40



2nd	peak	at	.0006	second
3rd	"	"	.0030	"
4th	"	"	.0050	"
5th	"	"	.0096	"
6th	"	"	.0116	"
7th	"	"	.0174	"

Transient # 41



2nd	peak	at	.0038	second
3rd	"	"	.0090	"
4th	"	"	.0144	"
5th	"	"	.0182	"
6th	"	"	.0894	"
7th	"	"	.0930	"
8th	"	"	.0986	"
9th	"	"	.1052	"
10th	"	"	.1168	"

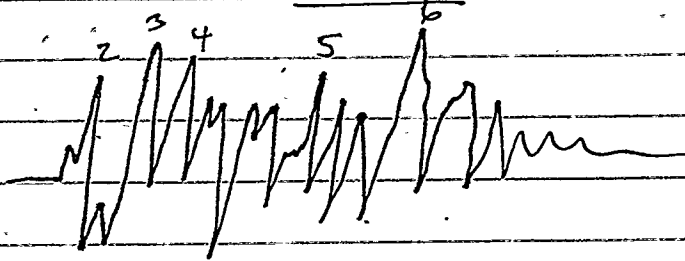
00107007 E QZ

Chanel 2

250 cm/sec

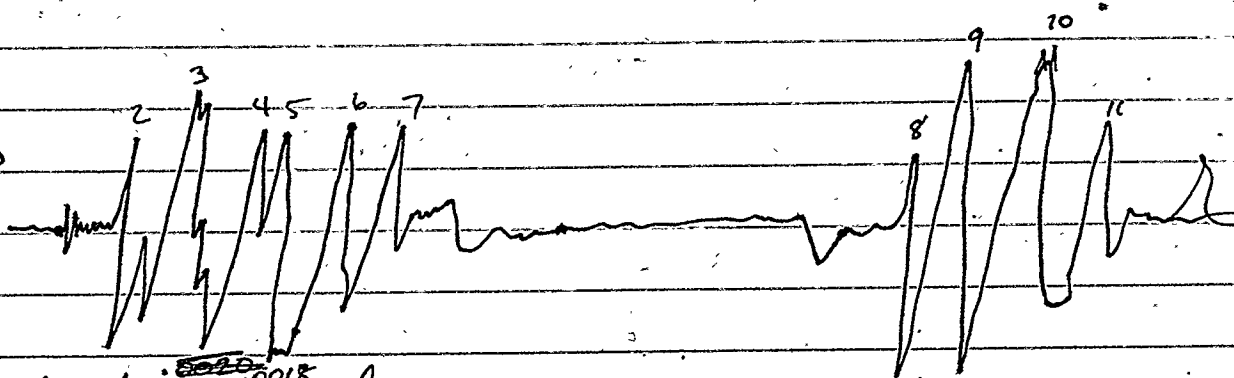
Worked

Transient #42



2nd	peak at	.0006	second
3rd	"	.0030	"
4th	"	.0050	"
5th	"	.0618	"
6th	"	.0178	"

Transient #43

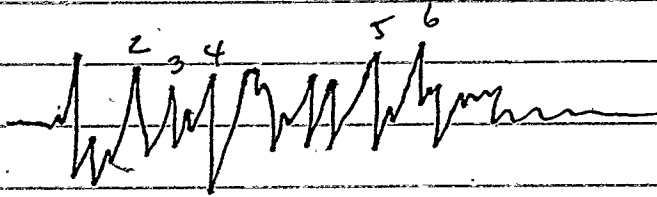


2nd	peak at	.0020 .0018	.0006 second
3rd	"	.0058	"
4th	"	.0102	"
5th	"	.0114	"
6th	"	.0168	"
7th	"	.0210	"
8th	"	.0882	"
9th	"	.0918	"
10th	"	.0984	"
11th	"	.1038	"

00107007 E QZ
Channel 2
250 cm/sec

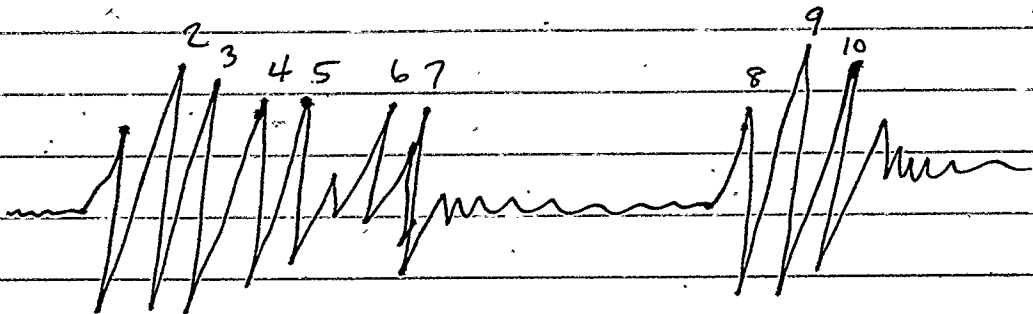
Worksheet

Transient #44



2nd peak at	.0026	second
3rd	.0044	"
4th	.0062	"
5th	.0148	"
6th	.0174	"

Transient #46

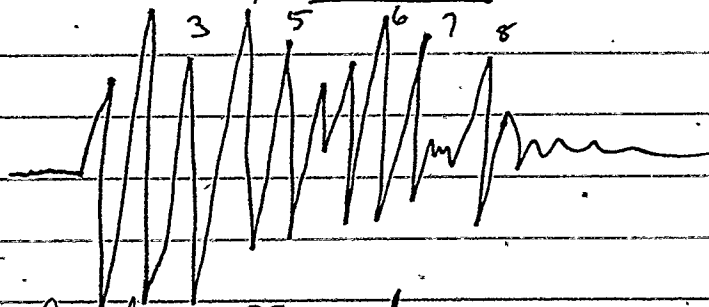


2nd peak at	.0038	second
3rd	.0074	"
4th	.0118	"
5th	.0158	"
6th	.0214	"
7th	.0274	"
8th	.0874	"
9th	.0910	"
10th	.0964	"

00107007 E QZ
Chamber 2
250 cm/sec

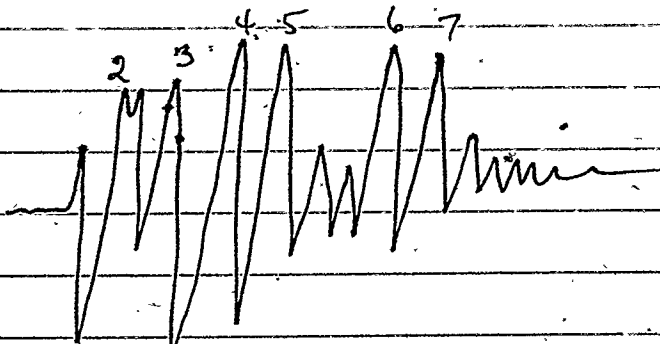
Worksheet

Transient # 47



2nd peak	at	.0032	second
3rd	"	.0056	"
4th	"	.0088	"
5th	"	.0118	"
6th	"	.0178	"
7th	"	.0210	"
8th	"	.0270	"

Transient # ~~47~~ 49

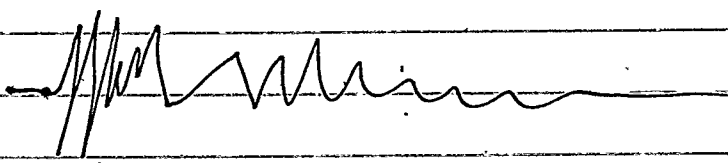


2nd peak	at	.0024	second
3rd	"	.0046	"
4th	"	.0084	"
5th	"	.0106	"
6th	"	.0170	"
7th	"	.0200	"

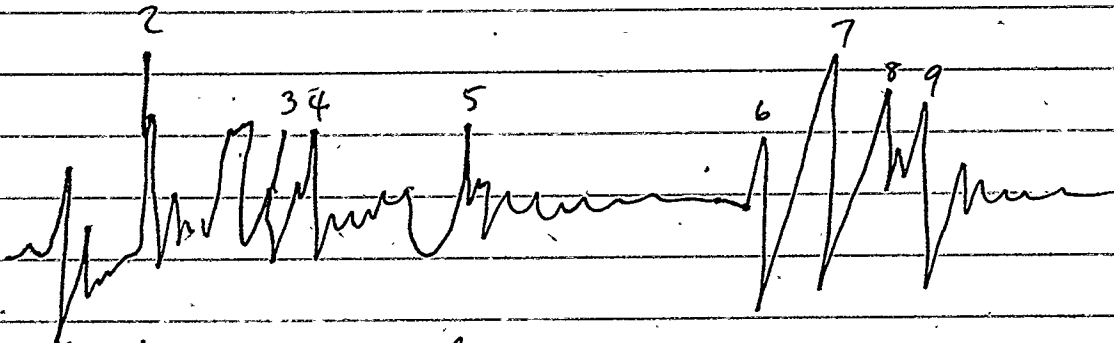
00107007 E QZ
Channel 2
250 cm/sec

Worksheet

Transient #50



Transient #51



2nd	peak at	.0038	second
3rd	"	.0126	"
4th	"	.0168	"
5th	"	.0270	"
6th	"	.0870	"
7th	"	.0906	"
8th	"	.0956	"
9th	"	.0972	"

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
1	21:55:03	Fight going on - a w/m with a cowboy hat seen hitting someone or something with a stick. A stick is seen hitting the ground near pick-up truck with camper before transient	00.000	Dull transient - doesn't look like a gunshot.	Sounds like a wood stick hitting the pavement an object. Not a gunshot
2	21:55:11	Fight going on - sticks seen hitting pavement	00.338	Same as #1	Same as #1 except sounds like wood hitting pavement
3	21:55:16	Same as #2	00.396	Same as #1	Same as #2
4	21:56:03	Same as #2	00.848	Same as #1	Same #2
5	21:57:17	Same as #2	02.400	Very, sharp transient with echo pattern. Sounds like a gunshot with the main echo about .06 seconds later	Sounds like a gunshot with echo.

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
6	21:59:09	Blurred picture	04.092	Very sharp transient but not echo pattern - rattling a decaying pattern... Doesn't really look like a gunshot	Sounds like video equipment being bumped.
7	22:01:21	Blurred picture	06.474	Sharp transient with echo pattern. Looks like a gunshot with the main echo .06 second later	Sounds like a gunshot with echo. *
8	22:02:12	Blurred picture	07.200	Very sharp transient with echo pattern. Looks like a gunshot with the main echo .04 second later	Same as #7 *
9	22:06:18	Blurred picture	11.272	Dull, low amplitude transient. Doesn't look like a gunshot	Sounds like video equipment being bumped. Doesn't sound like a gunshot
10	22:06:19	Blurred picture	11.350	Same as #9	Same as #9

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
11	22:06:25	Picture blurred	11.554	Very sharp transient with echo pattern. Sounds like a gunshot with main echo 0.03 second later.	Sounds like a gunshot with echo. *
12	22:08:04	Picture blurred	12.598	Dull transient with limited echo pattern. Probably not a gunshot.	Sounds like video equipment being bumped. Doesn't sound like a gunshot.
13	22:14:15	Picture blurred	19.164	Same as #12	Same as #12
14	22:18:00	Picture blurred	22.642	Same as #12	Same as #12
15	22:18:06	Picture blurred	22.828	Very sharp transient with high amplitude echo pattern. Looks like a gunshot with main echo 10 second later.	Sounds like a gunshot with high level echo. *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
16	22:18:21	Picture blurred	23.356	Same as #15	Same as #15 *
17	22:19:09	View of parked cars across street	23.964	Same as #15	Same as #15 *
18	22:19:10	Same as #17	24.018	Same as #15	Same as #15 *
19	22:20:14	Same as #17	25.102	Same as #15	Same as #15 *
20	22:24:26	W/M's around Ford Fairlane with weapons but no one seen shooting.	29.368	Very sharp transient with high amplitude echo pattern. Looks like a gunshot with main echo .09 seconds later	Same as #15 *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
21	22:26:19	Same as #20	31.206	Very sharp transient with a decaying echo pattern. Looks like a gunshot.	Sounds like a gunshot with minimum echo *
22	22:26:25	Same as #20 except w/m with white sweeter probably fire.	31.474	Very sharp transient with limited echo unless #23 is coded. Looks like a gunshot with main echo .02 second later. *	
23	22:26:27	Same as #20	31.566	Fairly sharp transient with limited echo pattern. Either an echo of #22 or a separate gunshot. #20	
24	22:27:03	Same as #20	31.706	Same as #21	Same as #21 *
25	22:27:15	Same as #20	32.050	Same as #21	Same as #21 *


TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
26	22:28:10	Blurred picture	32.906	Same as #21	Same as #21 *
27	22:28:18	Blurred picture	33.252	Same as #21	Same as #21 *
28	22:29:04	View of pavement and part of truck	33.682	Same as #21	Same as #21 *
29	22:29:10	Same as #28 except no truck	33.890	Same as #21	Same as #21 *
30	22:30:19	Same as #29	35.170	Very sharp echo with a fairly dull main blast. Looks like a gunshot with the original blast muffled.	Sounds like a shotgun blast that is muffled with a sharp echo. *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
31	22:31:16	Save as #29	36.054	Save as #21	Save as #21 *
32	22:34:18	Blurred picture	39.030	Save as #21	Save as #21 *
33	22:35:12	Blurred picture of individuals around Ford Fairlane and Van.	39.886	Save as #21	Save as #21 *
34	22:35:18	Save as #33	40.134	Save as #21	Save as #21 *
35	22:36:28	Save as #33	41.354	Save as #21	Save as #21 *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
36	22:37:05	Same as #33	41.706	Same as #21	Same as #21 *
37	22:37:29	Views of W/M's near Ford Fairlane ad Van with a W/M (slenderly built, tan, blue-jean outfit) seen firing a shoulder weapon on right shoulder near left front of Ford Fairlane	42.394	Same as #21	Same as #21 *
38	22:38:09	View of W/M's near Ford Fairlane ad Van.	42.710	Very sharp transient with echo pattern. Looks like a gunshot with main echo .11 second later	Sounds like a gunshot with echo. *
39	22:38:17	Same as #38	42.990	Same as #21	Sounds like small caliber weapon with limited echo. *
40	22:40:03	Same as #38	44.514	Same as #21	Same as #39 *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
41	22:40:25	Same as #38	45.256	Same as #30	Same as #30 *
42	22:41:29	Same as #38	46.324	Same as #21	Same as #39 *
43	22:42:29	Same as #38	47.352	Same as #30 but original blast is not as ruffled or dull	Same as #30 except not as muffled. *
44	22:43:05	Same as #38	47.610	Same as #21	Same as #39 *
45	22:51:10	Blurred picture of back of pick-up truck and people lying on ground	55.444	Sharp, low amplitude transient with no real echo pattern. Doesn't look like a gunshot	Sounds like movement of video equipment - not a gunshot!

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
46	22:51:27	Sae as #45 except fragments seen flying from side of track	56.212	Very sharp transient with distinct echo pattern. Looks like a gunshot with minor echo .09 second later	Sounds like a gunshot with high amplitude echo pattern *
47	22:58:14	Blurred picture	62.718	Very sharp transient with a short echo pattern. Looks like a gunshot	Sounds like a gunshot *
48	23:01:10	Blank picture	65.636	Sae as #45	Sounds like video equipment movement. Doesn't sound like a gunshot.
49	23:01:25	Blank picture	66.068	Sae as #47	Sae as #47 *
50	23:02:14	Blank picture	66.666	Very sharp transient with odd shaped echoes. Probably a gunshot.	Sounds like a gunshot very near microphone causing distortion. *

TRANS. #	VIDEO TIME	VIDEO INFORMATION	VISICORDER TIME	VISICORDER INFORMATION	AURAL
51	23:03:16	Picture black	67.738	Very sharp transient with high amplitude echo pattern. Looks like a gunshot with the main echo .09 second later.	Snds like a gunshot with a strong echo pattern. 



ASSOCIATED PRESS

Marty Nathan, widow of a victim of violence at 1979 Communist Workers Party rally, talks to reporters at end of civil suit.

Jury Fixes Damages in Greensboro Klan Case

Widow Awarded \$355,100; 2 Wounded Protesters Win Smaller Sums

Associated Press

WINSTON-SALEM, N.C., June 8—A federal jury today ordered three Ku Klux Klansmen, three Nazis and two Greensboro police to pay \$355,100 to the widow of one of five demonstrators shot to death in a 1979 anti-Klan rally.

The jury, which on Friday found the eight liable for wrongful death after a 13-week trial in the \$48 million civil suit, also ordered four of the defendants to pay \$38,360 to a wounded demonstrator, Paul Bermanzohn, and ordered two of the four to pay

\$1,500 to another wounded demonstrator, Tom Clark, for assault and battery.

Two previous criminal trials resulting from the Communist Workers Party rally ended in acquittals.

"As far as the incident that gave rise to the suit, everyone I think would agree was a tragedy without regard to responsibility," said U.S. District Court Judge Robert H. Merhige Jr. "I don't know of anyone, including the defendants, who doesn't have great sympathy for the situation. But there ought to be an end to this litigation."

The six-member jury found the eight liable in the death of Dr. Michael Nathan. But it decided that 45 Klansmen, Nazis, Greensboro police and federal agents did not engage in a conspiracy against Nathan or the other demonstrators.

The defendants included 20 Klansmen and Nazis, four federal agents, 20 Greensboro police and other officials and the city of Greensboro.

Found liable in Nathan's death were police informant Eddie Dawson, who allegedly was an "agent provocateur" leading the Klan-Nazi caravan to the rally; Klansman David Wayne Matthews; Klansman Jerry Paul Smith; Nazi Roland Wayne Wood; former Nazi Jack Fowler; Nazi Mark Sherer; police Lt. P.W. Spoon, the events commander on the day of the rally, and police Detective J.H. Cooper, who was Dawson's control agent.

Matthews, Smith, Wood and Fowler were also found liable of assault on Nathan and demonstrators Bermanzohn and Clark. All four had been acquitted in the 1980 and 1984 trials, while Dawson was acquitted in the 1984 trial.

Plaintiffs' attorney Flint Taylor said the jury might have concluded that Nathan's was the only wrongful death because he was not an official member of the party when he was shot. Nathan joined the party on his deathbed.

On TV: Lugar, Motley, Warnke, Arbatov, Leahy

Guests on major television network interview programs today:

Sen. Richard G. Lugar (R-Ind.), chairman of the Senate Foreign Relations Committee; Sen. Christopher J. Dodd (D-Conn.) of the committee; Langhorne A. Motley, assistant secretary of state for inter-American Affairs, and Manuel Cordero, minister-counselor and deputy chief of mission, Nicaraguan Embassy, on "This Week With David Brinkley" (ABC, WJLA), 11:30 a.m.

Georgi Arbatov, head of the Soviet U.S.-Canada Institute; Paul Warnke, SALT II negotiator; Seymour Weiss, former ambassador to the Bahamas, and Leslie Gelb of The New York Times on "Face the Nation" (CBS, WDVM), 11:30 a.m.

"Meet the Press" is preempted by the French Open Tennis Tournament.

Sen. Patrick J. Leahy (D-Vt.), vice chairman of the Select Committee on Intelligence, on "John McLaughlin: One on One" (NBC, WRC), 3 p.m.

Civil Rights Forces Win Part of 1979 Klan Case

Federal Jury Finds 8 Greensboro Defendants Liable in 1 of 5 Communists' Deaths

By Bill Peterson
Washington Post Staff Writer

A federal jury gave civil rights forces a partial victory yesterday, finding two Ku Klux Klansmen, three Nazis, two police officers and a police informer liable in the wrongful death of one of five communists killed during a 1979 anti-Klan demonstration in Greensboro, N.C.

It was the first time in three trials that anyone had been found responsible for wrongdoing in the confrontation. But the survivors of the dead members of the Communist Workers Party had sought a much broader decision.

The jury, deciding a \$48 million civil suit, found that the defendants were not liable for four deaths. It also rejected allegations that Klansmen, Nazis, Greensboro police and federal agents conspired to violate

the civil rights of demonstrators at the Nov. 3, 1979, "Death to the Klan" rally.

The six-member jury found liability only in the death of Michael Nathan. It also found two Klansmen and two Nazis liable for assault and battery on Nathan, a 32-year-old pediatrician, and on two other injured demonstrators.

Jurors were to meet today to determine damages in the case.

Plaintiffs had asked \$3.9 million in damages for the death of Nathan; \$2 million for injuries suffered by Paul Bermanzohn, who is still partially paralyzed from head wounds, and \$102,000 for Tom Clarke, who received multiple gunshot wounds during the shootout near a black housing project.

The verdict came after 11½ hours of deliberation in a federal district court in Winston-Salem, N.C.

A total of 101 witnesses testified in the 13-week trial, which plaintiffs called their "last chance for justice." Two criminal trials had ended in acquittal.

Earlier in the day, the jurors told U.S. District Court Judge Robert H. Merhige Jr. that they could agree on only one of eight counts in the case, but the judge told them to keep working.

"This case ought not to be decided because somebody is a member of the Communist Party or the Klan or the Nazi Party," Merhige said in instructing the jury. "Our system of justice does not allow jurors to be

influenced by sympathy or prejudice."

The controversial case had attracted widespread national attention among civil rights groups outraged by the failure of state and federal prosecutors to win convictions in the two criminal trials.

Yesterday's decision left lawyers confused.

"It's a very difficult decision to understand or explain," said Carolyn McAllaster, a lawyer for the Greensboro Civil Rights Fund. "We're very pleased that we have finally won some victories, but disappointed that we didn't receive total justice."

"It's a tremendous victory that a North Carolina jury found, against North Carolina policemen," said Andrea Burnstein, speaking for the fund. "However, the fact that only certain plaintiffs were found for can be only attributed to racial or political prejudice."

Sixteen plaintiffs brought the suit. The three whom the jury, which included one black, found eligible for damages were white.

Nathan was the only one of the five killed who wasn't a member of the Communist Workers Party when he was shot. He joined the party on his deathbed. Several others who died during the shootout carried firearms.

No policemen were present at the site of the confrontation, despite evidence indicating that Greensboro police knew both sides were armed and spoiling for a fight.

Found liable for Nathan's death were Edward Dawson, a Greensboro police officer who posed as a Klan member and led a caravan of cars that disrupted anti-Klan demonstrators as they prepared for a march; Greensboro police detective J.H. (Rooster) Cooper, Dawson's "control agent"; Lt. P.W. Spoon, who was in charge of police protection at the march, and five defendants who appeared prominently on videotapes of the confrontation.

They were Klansmen David Wayne Matthews and Jerry Paul Smith; Nazi Roland Wayne Wood, who wore a T-shirt to the trial that said "Eat Lead, You Lousy Red"; former Nazi Jack Fowler, and Nazi Mark Sherer.

Defense lawyers said demonstrators lured klansmen and Nazis to the anti-Klan rally in an attempt to attract media attention and build party membership.

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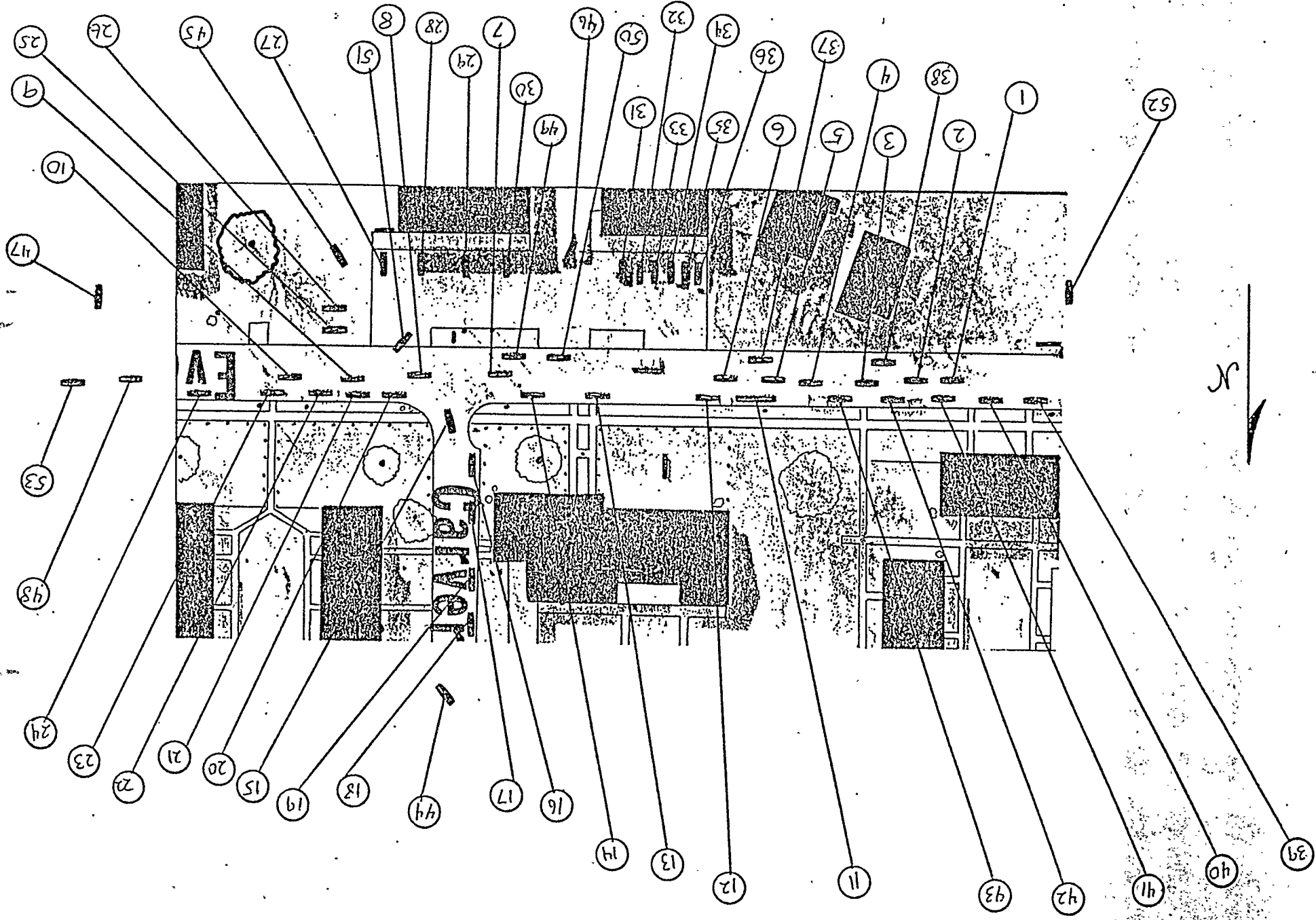
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1 UNITED STATES DISTRICT COURT
2 MIDDLE DISTRICT OF NORTH CAROLINA
3 GREENSBORO DIVISION

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UNITED STATES OF AMERICA)	
V.)	Criminal Action
VIRGIL L. GRIFFIN,)	No. CR-83-53-G
EDWARD WOODROW DAWSON,)	Winston-Salem, North Carolina
DAVID WAYNE MATTHEWS,)	January 27, 1964
ROLAND WAYNE WOOD,)	11:05 o'clock A.M.
JERRY PAUL SMITH,)	
JACK WILSON FOWLER, JR.,)	
ROY C. TONEY,)	
COLEMAN B. PRIDMORE, and)	
RAEFORD MILANO CAUDLE)	

16 EXAMINATION OF BRUCE E. KOENIG
17
18 BEFORE THE HONORABLE THOMAS A. FLANNERY

20
21 TRANSCRIPT ORDERED BY: R. JOSEPH SHER, ATTORNEY,
22 UNITED STATES DEPARTMENT OF JUSTICE
23
24
25

1 APPEARANCES:

2 DANIEL L. BELL, II,
3 NORAJEAN FLANAGAN, and
4 GREGORY F. LINSIN, Attorneys,
United States Department of Justice,
5 appearing on behalf of the United States of America.

6 FRED R. HARWELL, JR., ESQ.,
7 appearing on behalf of the
8 Defendant Virgil L. Griffin.

9 THOMAS J. KEITH, ESQ.,
10 appearing on behalf of the
11 Defendant Edward Woodrow Dawson.

12 JIM D. COOLEY, ESQ.,
13 appearing on behalf of the
14 Defendant David Wayne Matthews.

15 ROY G. HALL, JR., ESQ.,
16 appearing on behalf of the
17 Defendant Roland Wayne Wood.

18 NEILL A. JENNINGS, JR., ESQ.,
19 appearing on behalf of the
20 Defendant Jerry Paul Smith.

21 JEFFREY P. FARRAN, ESQ.,
22 appearing on behalf of the Defendant
23 Jack Wilson Fowler, Jr.,

24 S. FRALEY BOST, ESQ.,
25 appearing on behalf of the
Defendant Roy C. Toney.

HAROLD F. GREESON, ESQ.,
appearing on behalf of the
Defendant Coleman B. Pridmore.

LEON E. PORTER, JR., ESQ.,
appearing on behalf of the
Defendant Raeford Milano Caudle.

1 THE COURT: All right. Let's bring the jury in.
2 (Jury in at 11:00 A.M.)

3 MR. LINSIN: The United States calls Special Agent
4 Bruce Koenig to the stand.

5 BRUCE E. KOENIG, GOVERNMENT'S WITNESS, SWORN

6 DIRECT EXAMINATION

7 BY MR. LINSIN:

8 Q Would you please state your name, sir, for the record?

9 A My name is Bruce E. Koenig, that's K-o-e-n-i-g.

10 Q And what is your present occupation, Mr. Koenig?

11 A I'm a Special Agent Supervisor with the Federal Bureau of
12 Investigation in Washington, D.C.

13 Q And how long have you been a special agent with the FBI?

14 A I came on board in 1970.

15 Q And where are you currently assigned?

16 A I'm assigned to the FBI headquarters in Washington.

17 Q What is the nature of your work at the FBI headquarters?

18 A I work in the Technical Services and Laboratory Divisions
19 in the field of magnetic tape analysis.

20 Q And what do you mean when you use the term "magnetic
21 tape," Mr. Koenig? What does that encompass?

22 A Any type of magnetic recording, cassettes, eight-tracks,
23 reel-to-reels, even phonograph records, micro cassettes,
24 anything that has a magnetic recording on it. That
25 would also include things like most film sound tracks and

1 videotapes. They're all magnetic patterns also.

2 Q What are your responsibilities in the field of magnetic
3 tape analysis?

4 A The majority of my work is in the forensic field; tape
5 enhancement, signal analysis, tape authenticity, voice
6 comparisons. But I'm also responsible for buying tape
7 recorders, tape and laboratory equipment for the FBI
8 world-wide.

9 Q And when you use the term "signal analysis," Mr. Koenig,
10 what do you mean by the term "signal analysis"?

11 A This is analyzing signals that are non-voice in nature.
12 We often analyze telephone sounds to determine what number
13 was called, gunshot sounds, radio frequency type sounds to
14 determine exactly what they are.

15 I did most of the work in the Air Florida crash involving
16 what was the speed of the engines at the time of the crash.
17 And we did that by analyzing the various sounds that were on
18 the recording that the engine makes at a certain thrust
19 level.

20 Q And for what agencies have you conducted forensic tape
21 examinations?

22 A I've conducted numerous exams for federal, state, and
23 local authorities in all 50 states, the District of Columbia,
24 Puerto Rico, Guam, the Virgin Islands, and for twelve foreign
25 countries.

1 Q And in how many different investigative matters have you
2 personally conducted taped examinations?

3 A I believe I'm up to almost eighteen hundred now.

4 Q And in the process of those examinations, Mr. Koenig,
5 what would be the total number of separate taped recordings
6 involved?

7 A Something over 5,000.

8 Q And of that number, Mr. Koenig, of 5,000, approximately
9 how many of your examinations involved videotapes as opposed
10 to audiotapes?

11 A In the last few years, the last five or six years, we've
12 gotten much more into videotapes. I would say that my
13 present work load is maybe twenty percent videotapes.

14 Q Mr. Koenig, do you devote the majority of your time to
15 magnetic tape analysis?

16 A Yes, sir, I do.

17 Q And how long have you been involved in this type of work?

18 A I've been involved full time since 1974, about ten years.

19 Q Have you had occasion to publish articles in your field
20 of expertise?

21 A Yes, sir; I've published a number of articles.

22 Q Have you instructed other persons in the field of
23 magnetic tape analysis?

24 A On a continuing basis. I train people within our agency
25 and also present papers and lectures to various legal and law

1 enforcement agencies.

2 Q Could you please tell us your formal educational
3 background, Mr. Koenig?

4 A Yes, sir. I have a Bachelor of Science degree from the
5 University of Maryland. I had a double major of physics and
6 mathematics. I've completed an electronics course through
7 DeVry Institute of Technology, and I have my master's degree
8 in forensic science.

9 Q Where did you obtain your master's, sir?

10 A I obtained it at George Washington University in
11 Washington, D.C.

12 Q Have you been accepted as a member of any professional
13 societies?

14 A Yes, sir. I am a member of the Audio Engineering
15 Society, the American Institute of Physics, and the
16 Acoustical Society of America.

17 Q In addition to the training you mentioned just a moment
18 ago, have you received any other more specialized training in
19 the field of magnetic tape analysis?

20 A Yes, sir. I have attended numerous seminars and schools
21 in my field, and I am the senior examiner in the FBI
22 laboratory now, in this field. I attended courses in
23 spectrographic analysis at Voice Identification,
24 Incorporated; digital signal processing equipment at
25 Spectrodynamics Corporation in San Diego; and I received

1 quite extensive training through Doctor Stockton and his
2 staff at the University of Utah and at his company, called
3 Sound Stream, which is a digital production type of company
4 in Salt Lake City, Utah.

5 Q Have you ever testified previously as an expert in the
6 field of magnetic tape analysis?

7 A Yes, sir.

8 Q On how many occasions would that have been, Mr. Koenig?

9 A Approximately a hundred and twenty-five.

10 Q On those occasions have you testified for the prosecution
11 and the defense?

12 A Yes, sir. Once we do our examination, we will provide
13 testimony free of charge for either the prosecution, defense,
14 or for the Judge himself, as a friend of the court.

15 Q Have you previously conducted examinations in criminal
16 investigations involving gunshots that had been recorded on
17 magnetic tape?

18 A Yes, sir.

19 Q And how many times have you examined magnetic tape that
20 had gunshots on it?

21 A I've conducted probably 30 or 40 exams, so that would
22 probably be approximately a hundred recordings.

23 Q And do you also routinely review the work done by others
24 in your FBI laboratory involving gunshots that have been
25 recorded on magnetic tape?

1 A Yes, sir. We have an ongoing process that most
2 examinations that are of anything but a fairly routine nature
3 that has been before are reviewed by all the examiners
4 whenever an exam is done. For instance, a lot of our work in
5 gunshots is also like evaluating silencers. It's against the
6 law to have a silencer, but you've got to prove that in fact
7 it is a silencer. And we conduct numerous examinations in
8 that field. And I review much of the test recordings that
9 are made to determine exactly what the silencers are doing to
10 the signals and what gunshots really look like under
11 real-world conditions.

12 Q In the course of your work, Mr. Koenig - and this is an
13 if-you-can kind of question - can you estimate approximately
14 how many different gunshot signals you've examined on
15 recorded magnetic tape?

16 A It would be a very large number. Certainly in the
17 thousands, because you have to run so many test shots to
18 determine things. When we first started getting into gunshot
19 analysis, we spent almost a year off and on just recording
20 gunshots from various other type of signals that may be
21 confused with gunshots. And this is an ongoing process for
22 us. So certainly in the thousands.

23 Q Now you testified previously that you have been qualified
24 in other courts as an expert in the field of magnetic tape
25 analysis. Have you also been qualified as an expert

1 concerning the analysis of gunshots that have been recorded
2 on magnetic tape?

3 A Yes, sir. On three or four occasions we - I have
4 testified in the field. A number of the other examiners or
5 other people have also testified. It's a field that we often
6 get what's called a "stipulation." In other words, the Court
7 agrees to take our evidence without us testifying, that
8 occurred in the case involving John Hinkley when he attempted
9 to assassinate President Reagan. We did all the gunshot
10 analysis work, but it was stipulated to and we did not have
11 to testify to the information.

12 Q Have you ever written or lectured concerning the field of
13 forensic gunshot analysis?

14 A Yes, sir. I've published a number of papers, including
15 the FBI's technical position paper, or most of that paper,
16 concerning the Kennedy assassination. I also assisted the
17 National Academy of Sciences in parts of their report
18 concerning the Kennedy assassination. I've written a number
19 of papers and presented lectures concerning gunshot analysis
20 to legal and scientific groups.

21 Q Now you mentioned the Kennedy assassination examination,
22 Mr. Koenig. Could you briefly describe what work you did so
23 the Court and the jury may understand what you're referring
24 to?

25 A Well, as you might imagine, if you watched the news,

1 during that attempted assassination there was a tremendous
2 amount of confusion; and the Secret Service and our
3 investigative agents in the field in Washington wanted to
4 immediately know how many gunshots were fired, if there was
5 an accomplice involved, if what we saw on film had happened
6 and the person they grabbed was the right person. So we had
7 to do a very - an exam almost immediately to determine how
8 many gunshots were fired, which we were able to determine.
9 We also determined that there were no other gunshots fired
10 other than from John Hinkley's gun. And we provided
11 assistance in locating where people were located at the
12 scene, in the sense of where John Hinkley was and where he
13 was shooting.

14 THE COURT: Are you talking about the Kennedy
15 assassination now?

16 MR. LINSIN: Yes.

17 BY MR. LINSIN:

18 Q Mr. Koenig, I had inquired as to the Kennedy
19 assassination.

20 A Oh, I'm sorry. I apologize.

21 The Kennedy assassination, which occurred when I was a
22 senior in high school in 1963, involved the assassination of
23 President Kennedy at the time. And several years ago a
24 Congressional Committee was looking into the assassination of
25 both President Kennedy and Doctor Martin Luther King.

1 Part of the results were that there was a second shooter
2 involved in the President Kennedy assassination, and this was
3 based on acoustical information that said that there was
4 evidence of other gunfire on this recording from a police
5 radio.

6 What happened was, the police were out there on their
7 motorcycles at the scene, and one of the radios got stuck
8 open, the button stuck, so you could hear what was going on.

9 Well, we reviewed the material and found that there was
10 no evidence for their finding. The tape did not reflect
11 something that we would perceive as a gunshot. So we then
12 also had the National Academy of Sciences - we were involved
13 with them - and they agreed with this finding, and they found
14 that the recording itself wasn't even from Dealey Plaza where
15 the president got killed; and second, that even if it was, the
16 recording they were looking at occurred about one minute
17 after the president was actually shot and he was on the way
18 to the hospital at that time.

19 But the Congressional Committee experts came up and said,
20 "Well, there's a 95 percent chance or better that there was a
21 second shooter." And here's a recording that didn't even
22 occur at the time of the assassination.

23 So I was very involved with that case to get it
24 straightened out, to ensure that - find out what really
25 happened in the matter.

1 Q Could you briefly describe, Mr. Koenig, the types of
2 equipment that you utilize in the area of magnetic tape
3 analysis?

4 A The equipment is mostly very electronic in nature. We
5 have a number of types of displays in what we call the
6 "frequency domain," so you can actually see various
7 components of the voice, for instance when somebody talks, or
8 components of non-voice signals, like telephone signals. You
9 can see them very graphically. We also can look at what's
10 call the wave-form display, which is used in things like
11 gunshots, where we actually look at the wave-form itself,
12 which is the same kind of thing you see on one of these
13 doctor shows where they show the guy's heart beating on a
14 monitor. Okay. That's the kind of display you would see.
15 We can actually just put that also on paper and stretch out
16 that information and get very high resolution.

17 We also use a lot of state-of-the-art filters. Part of
18 our work involves removing extraneous information. An under-
19 cover agent and a defendant meet in a bar to discuss nar-
20 cotics, and they're playing the jukebox very loud. We have
21 to try to remove, as much as possible, the music that's
22 interfering with that conversation, to make it more
23 understandable. So we have a large number of mostly digital-
24 type filters, computer filters. We have lots of professional
25 tape recorders, as you might imagine; and all kinds of

1 auxiliary equipment. We have our own full-scale computer
2 system that will allow us to digitize anything with very high
3 resolution, and all the peripherals to that.

4 Our facility now is probably going to be moving in the
5 next two months. We've plain run out of space at FBI
6 headquarters. The building is totally full, and we're going
7 to be moving to even larger facilities to allow us to do we
8 feel even more, because we're somewhat space limited at the
9 moment.

10 Q Mr. Koenig, in addition to the other cases which you have
11 already discussed, can you describe any other cases in which
12 you have done work that may be known to the jury?

13 A Well, I work on most major airline crashes. The closest
14 one to here, I worked on the 1974 Eastern Airlines crash in
15 Charlotte. I testified in that case. I worked on the ABSCAM
16 case involving political corruption of U.S. Congressmen and
17 others. I worked on what we call the WOODMUR case, which
18 involved the assassination of a federal judge in Texas. I
19 worked on a considerable number of foreign espionage cases
20 involving Russian and Polish spies in this country.

21 Q And did your work in each of those cases, sir, involve
22 an examination and analysis of some type of magnetic tape?

23 A Yes, sir. All my work involves magnetic tape.

24 MR. LINSIN: Your Honor, at this time the United
25 States submits Mr. Koenig as an expert in the field of

1 magnetic tape analysis.

2 MR. GREESON: If I might, let us lodge an objection
3 for the record, Your Honor.

4 THE COURT: All right.

5 The Court will accept him in that capacity as an
6 expert and qualified to give an opinion.

7 Now I might say this to the jury at this time, as to
8 expert testimony. The Rules of Evidence ordinarily do not
9 permit witnesses to testify as to opinions or conclusions.
10 An exception to this rule exists as to those whom we call
11 expert witnesses, such as this gentleman.

12 An expert witness in a particular field is permitted
13 to give his opinion in evidence. Witnesses who, by education
14 and experience, have been expert in some art, science,
15 professional calling, may state an opinion as to relevant and
16 material matter in which they profess to be expert. And they
17 also may state their reasons for their opinions.

18 You are not bound by the opinion of an expert. If
19 you should decide that the opinion of an expert witness is
20 not based upon sufficient education and experience, or if you
21 should conclude that the reasons given in support of the
22 opinion are not sound or that the opinion is outweighed by
23 other evidence, you may disregard the opinion in whole or in
24 part. In other words, you should consider the expert's
25 testimony in connection with the other evidence in the case

1 and give it such weight as in your judgment it is fairly
2 entitled to receive.

3 All right.

4 BY MR. LINSIN:

5 Q Mr. Koenig, let's begin with some basic propositions.
6 Would you tell the jury just what a sound wave is?

7 A Yes, sir. When anything makes a noise, a tree falls
8 down, or you talk, you vibrate the air, causing particular
9 types of waves. And these waves then go through the air and
10 vibrate the components of your inner ear and allow you to
11 hear that. The waves are very unique in a sense, that we can
12 you can hear me talking and hear my sound waves and hopefully
13 understand exactly what I'm saying.

14 Other types of sounds aren't as easy to decipher. For
15 instance if I go (demonstrating), well, if I ask you how long
16 did that last that I hit that, that that sound lasted, you
17 would be - it would be very difficult for you to do that.
18 Whereas, instruments could easily do that. So you have these
19 sound waves that are just simply vibrations in the air that
20 are audible to you, usually in a range that we call about 20
21 hertz, or cycles per second, up to about 20,000. Some people
22 can hear a little bit better; and all of us, as we get a
23 little bit older, start losing our high-frequency hearing
24 abilities.

25 Q All right. Now how fast does a sound wave move or

1 travel?

2 A Okay. A sound wave is very different than light. Light
3 waves travel close to instantaneously, especially over short
4 distances. Sound waves don't. Sound waves will vary in
5 their speed by elevation and temperature. Unless you're in
6 the upper atmosphere, the main consideration is temperature.
7 For instance, at around 55 degrees, the speed of sound would
8 be about 1,100 feet per second. And we've all experienced
9 this difference. If you see lightning way off in the
10 distance, and about five seconds later you hear the thunder,
11 okay, it's traveling at 1,100 feet per second, and that's
12 about 5,500 feet or a little bit over a mile. So you can say
13 the lightning is approximately one mile away, because the
14 sound waves are much slower than the light waves. So like I
15 said, sound travels at approximately a mile every five
16 seconds. So you could always determine how far away
17 lightning is.

18 If you see a hunter off out in the woods, way off the
19 distance, and you see him shoot a gun, you see the smoke
20 oftentimes comes out of the gun before you hear the gunshot;
21 or somebody chopping wood, you'll see the person chop the
22 wood and his ax is coming back up and then you hear the
23 sound, because the sound takes longer to get there than you
24 can see him doing it. Sound waves is at a very finite - what
25 we call finite speed. Certain temperature, you have a

1 certain speed of sound.

2 Q Well, Mr. Koenig, does the loudness of any particular
3 sound have any effect on how fast that sound wave travels?

4 A No, sir. I could talk very softly, or I could yell at the
5 top of my lungs, and the speed of sound is always the same;
6 it doesn't vary.

7 Q And what happens to one of these sound waves when it
8 bumps into some stationary object?

9 A Well, as we all know, sound waves don't have a lot of
10 power in the sense that they're going to knock the wall down
11 when you yell at it. What happens is you get a certain
12 amount of absorption, which is usually not that much.
13 Usually it bounces off the wall in a very particular way.
14 It's something like a pool shot. You're playing billiards
15 and you hit the ball and it goes off at a certain angle.
16 It's the same way with sound. It hits at a certain angle,
17 it's always going to go off at the same angle. A certain
18 amount of it is absorbed, but not a whole lot.

19 On a flat wall you don't get much absorption. If I go
20 in this courtroom - and it doesn't have a lot of flat walls;
21 it's broken up - but if I go (demonstrating), we all can hear
22 after I clap, the sound after I clap. It's bouncing off the
23 walls and coming back to us. We call that room reverberation.
24 So when you make a loud sound, it bounces all over the walls
25 until it finally dies out, and then you can't hear it

1 anymore.

2 Q Now, Mr. Koenig, would you describe for the members of
3 the jury just what a magnetic tape is?

4 A Well, I've always heard the old analogy that it's
5 cellophane, glue and rust, which really isn't - it's fairly
6 accurate. The backing of a tape is just plastic. It's
7 usually polyester. Some of the old tapes are acetate. But
8 they're just basically a polyester.

9 Onto that is glued iron oxide, which if any of you-all
10 had any chemistry, is basically rust. And it's held onto the
11 tape with this - they call it a binder, but it's a type of
12 glue that actually holds the tape or this magnetic iron oxide
13 or - there's all kinds. If you're into tape recording,
14 there's ferric oxide and metallic, and all of them are a basic
15 of polyester backing, this binder of glue and with this oxide
16 coating on top of it.

17 Q And what then is a magnetic recording on one of these
18 tapes? What happens to this magnetic tape?

19 A Okay. When you record something on a tape, you're
20 really not adding anything to the tape at all. And that's
21 why you can erase it. You don't take anything away when you
22 erase it. All you're doing is taking - this iron oxide has a
23 bunch of little magnetic fields. It's often like, if you've
24 ever seen in high school or something, where you put a magnet
25 and you put a bunch of iron filings and it makes all this

1 funny pattern; or you just pick a magnet and it picks up a
2 whole bunch of iron filings and spreads them all over the
3 place. Well, it has a certain magnetic field.

4 So when you put a recording on a tape, all you do is
5 line up these fields. When you erase the tape, all you do is
6 put them in a random fashion. In other words, they're going
7 all different directions. If you want to record over it
8 again, you put a magnetic field onto it, you line up all the
9 patterns again. And if you look at them, you can actually
10 look at these domains, as we call them, lined up on the tape.
11 You can actually see them. They're all just vertical lines
12 going right down the tape. And when you erase them, they
13 just disappear and you don't see them. But nothing has been
14 removed or taken from the tape. You're just lining up these
15 little magnets. That's really what they are, just little
16 tiny magnets, lining them up on the tape.

17 Q Now could you describe briefly how it is that a sound
18 wave comes to get imprinted on a magnetic tape?

19 A Well, in a normal case you'll have a microphone.
20 There's various types of microphones. But basically, simpler
21 types have a diaphragm which vibrates something like your
22 telephone when you're talking on your telephone. It's got a
23 microphone in it so the other person can hear on the other
24 end. It vibrates and sends out a signal, an electrical
25 signal; and it's low, not very high voltage. That is then

1 boosted in a tape recorder or a video recorder, and put
2 through - into what we call a magnetic head.

3 Okay. A magnetic head is like - it's a magnet. It's a
4 magnet that you can control. It's an electromagnet. So you
5 put a certain type of, you know, electricity or this current
6 from the microphone in there, it puts a certain pattern onto
7 the tape. All it's doing is lining up these other magnets.
8 So you've got this one magnet - electromagnet lining up all
9 these other little magnets on the tape. And then when you
10 want to play it back, all you do is take another magnet, run
11 this one magnetic field right across it, and if any of you
12 have taken these little magnets - you hold things up on your
13 refrigerator - and if you put them together certain ways, it
14 won't even go together, and other times they really stick
15 together very well. Well, it's the same thing. It just sees
16 that magnetic field going past this other electromagnet and
17 puts out this little low - low current, this little, small
18 amount of electricity which is boosted, amplified again, and
19 brought out so you can hear it, either on a speaker or
20 headphones or something.

21 Q Now, Mr. Koenig, once a sound wave has been imprinted on
22 magnet tape in the process you were just describing, can you
23 visually see this recorded sound on the magnetic tape?

24 A Yes, sir. You can put a solution, a very weak solution
25 which kind of has some of these magnetic filings we were

1 talking about - it doesn't hurt the tape or anything - and
2 you can put it on there and you can actually see all of them
3 lined up. Usually we view it - the patterns are real -
4 you know, the tape is only like a quarter-inch wide. It's
5 real narrow. So the pattern on the tape is even smaller than
6 that usually. So they're very small, so you look under a
7 low-power microscope and anybody can look at it and it's very
8 obvious what kind of pattern is on there.

9 Now you couldn't look at the pattern and say, you know,
10 that's, you know, Aunt Nellie saying, "Let's go to the
11 movies," but you can say that there is a pattern on the tape
12 and there is a recording there.

13 Q Now could you just describe in some greater detail the
14 equipment that you and your laboratory use when you conduct
15 an analysis of magnetic tape?

16 A Well, as I said, we talked about all these graphic
17 displays we look at. So what we do is, as part of this
18 equipment - your ear is very sensitive to certain types of
19 sounds. And I talked about voice sounds and music, not so
20 much on things like - something where I bang something.
21 Instruments will give you a better readout on stuff like
22 that. But we use the information from these graphic displays
23 in our readouts. And by listening and through the
24 experience - I mean a rookie in our field has like two years
25 full-time experience doing nothing but this. It just

1 requires a lot of time and experience, because you listen to
2 tapes just all day.

3 And you use the equipment in your lab. It's very
4 sophisticated technical gear that we continue to pay lots of
5 money for and upgrade. And by listening and your experience,
6 can make very, very accurate decisions about things. And then
7 we come back and listen to a part. Like for instance, I'm
8 filtering a tape. I want to make it more understandable.
9 What if I run it through a filter - and this has music in the
10 background - and it takes all the music out. And you say,
11 "Boy, I did a wonderful job." However, if the voice isn't
12 understandable, I did a lousy job. To us we want the voice
13 understandable. So one filter, you'd say, "Well, gee, tech-
14 nically it did the job perfectly." But in doing so, it
15 degraded the intelligibility of the speech, therefore, we
16 wouldn't do that. I'd rather leave some of the music in and
17 use another filter that only takes half of the music out, but
18 allows me to hear.

19 So we're always aiming toward, like, "enhancement," as we
20 call those type things, to make it more understandable. You
21 can't just technically run it through a machine and say, "Oh,
22 I've got it."

23 And the other problem is that, you know, some people
24 come in our lab and kind of call it "Star Wars" or something,
25 and we've got all these instruments and lights blinking, and

1 there's two million knobs on them. Well, if it goes through
2 and takes the music out and hurts the voice, we might be able
3 to adjust the filters to do a better job of it. So you've
4 always got to be thinking, you've always got to be listening
5 to what you're doing, to interpret what the equipment is
6 doing for you. And then to look at these displays and say,
7 you know, "That's what I'm looking at." You know, a display
8 is no good if somebody walks up and hands me this wave form
9 we talked about, like - it could be somebody's heartbeat,
10 you know, if I didn't, you know, have any idea. The guy just
11 says, "What is this?" Well, it could maybe be a lot of
12 things.

13 But if I listen to it, it might become very obvious when
14 I'm listening to it.

15 Q Now we've spoken quite a bit, Mr. Koenig, about magnetic
16 tapes. But, again very briefly, could you describe what a
17 videotape looks like rather than - as opposed to just a regu-
18 lar audiotape that might be in a tape recorder. What dif-
19 ferent types of things are on a videotape?

20 A Well, videotape really is displaying two different
21 things. You have the audio information, which is pretty well
22 done the same as a regular tape recorder. And you've got
23 visual information, which is put on by a very sophisticated
24 head design which runs at very high speeds. But basically
25 it's the same. It's putting a magnetic pattern on that tape

1 that can be read by a playback tape recorder.

2 And if any of you all bought video machines, you know,
3 you always get these things and the more expensive ones have
4 eight heads and the cheaper ones have four heads. Well, all
5 of those heads do different functions for you. And that's
6 what's happening there. They're just reading the same thing.
7 It's just put on in a different way and it can be read back
8 through the equipment to produce a visual image. But the
9 sound track would look basically the same as it would on a
10 regular tape recorder.

11 Q Is the video track that is on a videotape separate and
12 apart from the audio track that is on that tape?

13 A It normally is, but the - what happens is, the manufac-
14 turers are trying to get better and better audio and they're
15 doing all kinds of little tricks of mixing the two together.
16 But that's more what's coming out as state of the art now,
17 and it's not basically what's used by most video recorders.

18 Q When you have occasion, Mr. Koenig, to conduct an
19 analysis of a videotape, do you examine both the audio and
20 the video portion of that tape?

21 A That kind of depends. Oftentimes, for instance in the
22 ABSCAM case, the video was fine; but the audio was sometimes
23 hard to understand because the microphone was maybe ten feet
24 away from where the people were talking and you were picking
25 up other noises. So sometimes we'll just copy the video

1 information directly from the original to our copy, and then
2 process or analyze just the sound track. So it really
3 depends on what we're looking for in a particular case.

4 Q Do you, however, view the video portion of the videotape
5 in conducting such an analysis?

6 A Oh, yes, sir.

7 Q Now, Mr. Koenig, were you requested to examine certain
8 videotapes that were made in connection with an incident that
9 occurred in Greensboro in November 1979?

10 A Yes, sir.

11 Q And would you tell us a little bit about how you first
12 became involved in analyzing those videotapes?

13 A Well, I think I was having a nice day on a - I can't
14 remember what day of the week it was - and all of a sudden
15 all these people trooped in and said, "We have all these
16 videotapes. Can you tell us how many gunshots were fired,
17 who they were firing at, you know, everything; everything you
18 can tell us about what happened at the scene?"

19 I think they expected that I would tell them in about
20 five minutes whether we could do such an examination or not.
21 And we at the time said, well, you know, we'd look at them,
22 but we're going to need the original recordings, which were
23 at a later date provided to us, where we could really get
24 started on our examination, just to see, you know, what could
25 you do.

1 You never know, looking at these things if - let's say
2 you have a bad microphone. So even though we can do such an
3 analysis, if the recording isn't good enough quality, you
4 can't do something like that.

5 Did I answer your question? I'm sorry.

6 Q I believe so.

7 Now subsequent to this first conversation you just
8 described, when was it that you first came into possession of
9 the original videotape in connection with this case?

10 A I received the original tapes in January of 1980.

11 Q And on those occasions in January of 1980, did you have
12 an opportunity to speak with the cameramen who had actually
13 shot the footage that you were going to examine?

14 A Yes, sir, I did.

15 Q And what information did you want to obtain from them,
16 Mr. Koenig?

17 A Basically, as best they could tell me, where they were
18 at the scene, what their equipment was like, the type of
19 equipment, what kind of microphone were they using, and how
20 were they using their microphone. You know, was the
21 microphone attached to the camera or was it separate. Any
22 information of that type that involved the sound recording,
23 basically, that they made.

24 Q Did you, during the course of those discussions with the
25 cameramen, obtain the model number and specifications of the

1 cameras and microphones that were used on November 3rd?

2 A Yes, sir.

3 MR. LINSIN: May I approach the witness, Your
4 Honor?

5 THE COURT: All right.

6 BY MR. LINSIN:

7 Q Mr. Koenig, I am going to place before you two items
8 that have already been introduced into evidence, Government's
9 Exhibit VT1(b) and VT2(b), and I ask you to take a look at
10 those two pieces of evidence, Mr. Koenig, and tell us if you
11 can identify them.

12 A Yes, sir.

13 Q What are they, sir? First, VT1(b).

14 A That is a copy of Channel 11 videotape with time code
15 added.

16 Q Have you ever seen that copy before?

17 A Yes, sir. This copy was given to me in August of 1980
18 by Special Agent Castaneda.

19 Q And what did you do with that videotape once you
20 received it?

21 A I used it to finish up my analysis in the matter, and
22 then subsequently to that I turned it over to the state
23 court.

24 Q Would that have been in Guilford County in Greensboro,
25 sir?

- 1 A Yes.
- 2 Q All right. And VT2(b)?
- 3 A Yes. I received that from Special Agent Castaneda in
4 January of 1980, and I also turned that over to the court in -
5 is it Guilford County?
- 6 Q Well, was it in Greensboro?
- 7 A Yes, sir.
- 8 Q Is that right? What is VT2(b)? I don't know what---
- 9 A I'm sorry. It's a Channel 2 videotape.
- 10 Q Now are these videotapes that you worked with during the
11 course of your analysis in this case?
- 12 A It's two of the videotapes I used, yes, sir.
- 13 Q And do they have a time code and channel character
14 imprinted on them?
- 15 A Yes, sir.
- 16 Q Now when you first met with the cameramen from Channels
17 2 and 11 in January of 1980, did you - were you present when
18 they carried their original tapes up to Washington?
- 19 A Actually, I believe they were all taken to Quantico,
20 Virginia, which is our training facility south of Washington,
21 D.C.
- 22 Q And did you have occasion to copy any information
23 directly from those original videotapes?
- 24 A Yes, sir. I made very high quality audio copies from
25 just the audio track of the video itself. That's what I was

1 interested in, predominantly at the time, so I copied that
2 and put some other information on the tape so I could very
3 accurately check things out on the tape.

4 Q All right. Now would this have been both the - you
5 copied both the audio track of the original tapes of Channel
6 11 and Channel 2, is that correct?

7 A Yes, sir. That's correct.

8 Q Now in the process of making that copy of just the
9 audio track from those videotapes, did you have occasion to
10 observe the videotapes as they were being played, and to
11 observe the monitoring equipment utilized in making the
12 copies?

13 A Yes, sir.

14 Q And tell us what opinion you might have as to what the
15 quality of those original tapes was, sir.

16 A I think the quality was excellent, of these two par-
17 ticular tapes; yes, sir.

18 Q Well now, you're referring to the copies before you.
19 But I'm talking now as to the original videotapes that were
20 brought up by the cameramen.

21 A They were actually much better quality than I had hoped
22 for. They were actually very excellent quality recordings.

23 Q And will you describe for the Court and the jury, Mr.
24 Koenig, the process whereby you made your audio copy from
25 this - these original videotapes? Tell us, please, what

1 equipment you used and what you did to obtain those audio
2 copies.

3 A Okay. The tapes were actually played back by Special
4 Agent Castaneda, and others down at Quantico. They used a
5 professional quality videotape recorder. And I took the -
6 you had two outputs off of the thing. One is video infor-
7 mation, the visual information, and one is the audio
8 information. So I took a direct line out of that tape
9 recorder, directly into my recorder, which was one of the
10 finest quality professional recorders made. I recorded very
11 high speed, fifty inches per second, and put a high-quality
12 time code on the second channel of the tape to allow me to
13 get very accurate timing sequence information off the tape.

14 In other words, I made the highest quality audiotape
15 that you virtually could make, to make sure I would lose
16 nothing off of the original.

17 Q And did you copy the audio track off of the entire
18 videotape?

19 A Yes, sir.

20 Q You didn't stop at any one point and cut anything off?
21 You copied all of the audio information on those original
22 videotapes?

23 A Yes, sir.

24 MR. LINSIN: May I approach the witness, Your
25 Honor?

1 THE COURT: Yes, sir.

2 MR. LINSIN: Mr. Koenig, I'm going to place before
3 you two additional exhibits that have also been admitted into
4 evidence, VT1(a)1 and VT2(a). I would ask you to examine
5 those exhibits, sir.

6 A I presume these are the original tapes. Since I didn't
7 take custody of them, I didn't personally mark them.

8 Q Okay. Are the markings on those two tapes consistent
9 with what you recall as the original tape?

10 A Yes, sir.

11 Q What was the brand of that - of the videotapes contained
12 in those two---

13 MR. GREESON: Well, I object to him reading
14 something off the box, unless he knows, Your Honor.

15 THE COURT: Well, it's in evidence, isn't it?

16 MR. HARWELL: No, sir.

17 MR. KEITH: Are you talking about on the original?
18 That's not in evidence.

19 MR. LINSIN: I believe I made a mistake on this
20 1(a)1. I do not believe 1(a)1 is into evidence, Your Honor.

21 A Well, one of them is Scotch. The other one - they've
22 got a sticker - without pulling the tape off, I couldn't be
23 sure what the brand name is.

24 BY MR. LINSIN:

25 Q Do you have an opinion as to the quality of Scotch brand

1 videotape?

2 A It's a high-quality, standard brand.

3 Q Thank you.

4 MR. LINSIN: Just one moment, Your Honor.

5 BY MR. LINSIN:

6 Q Now in addition to the two videotapes that you've just
7 identified, VT1(b) and VT2(b), and the audiotapes that you
8 have described, did you have occasion to examine other
9 videotapes that had been taken at the scene on that day?

10 A I looked briefly at the Channel 12 videotape, but I did
11 not make any copies since I was advised that the--- I take
12 it back. I did receive a copy afterwards. I looked at the
13 original and---

14 Q And what was your opinion as to the potential benefit of
15 examining the Channel 12 videotape?

16 A We could find nothing that was useful to us in our exa-
17 mination, so we really didn't proceed further on it.

18 Q Why is that, sir?

19 A I was told that there was---

20 MR. COOLEY: Objection to what he was told.

21 THE COURT: I'll have to sustain that, I guess;
22 what he was told.

23 BY MR. LINSIN:

24 Q If you know, sir, why did you not feel the Channel 12
25 tape contained any significant information based upon your

1 viewing of that videotape?

2 A We viewed it. We didn't see any information that at
3 least we deemed appropriate. We didn't see anything about
4 the shooting or anything on that particular tape.

5 Q Oh. Now did you view any other videotapes or copies of
6 any other videotapes?

7 A Videotapes?

8 Q Other than Channel 12 and Channel 11 and Channel 2?

9 A Not any from original videotapes. We had additional
10 videotapes, like slow motion and things like that.

11 Q Did you have occasion to view any 16-millimeter film or
12 copies of 16-millimeter film?

13 A Yes, sir. I made a high-quality copy from the Channel
14 11, which was a film, not a videotape.

15 Q Was it Channel 8 that was on the film?

16 A Channel 8; I'm sorry.

17 MR. KEITH: Objection, Your Honor.

18 THE COURT: Well, I'll permit it.

19 BY MR. LINSIN:

20 Q And did you reach a conclusion as to the potential value
21 of conducting extensive examination of the Channel 8 tape or
22 film?

23 A Yes, sir. We analyzed the sound track, and the sound
24 track was so distorted that it just wasn't very useful to us.
25 We used some of the visual information on Channel 8 at times,

1 but not very much.

2 Q What did you conclude as to the reason why the audio
3 information on the Channel 8 film was so distorted?

4 A I would presume it's probably the microphone. They told
5 me the equipment was fairly old. And I don't think we worry
6 so much about why, just the end result is the quality was so
7 poor as not to be useful.

8 Q So in addition to the audiotapes we've discussed and
9 the videotapes which you've identified, did you request or
10 gain access to any additional charts or graphs or any addi-
11 tional information in the process of conducting your
12 examination?

13 A Yes, sir. We needed and received blow-ups of one-inch-
14 to-five-foot range of the general area of the shooting. We
15 also had to have photogrammetric work done in our laboratory
16 by Special Agent Richards, to put the cars' locations exactly
17 on the chart.

18 Q Why did you need that information, Mr. Koenig?

19 A Much of our work we're doing on this is dealing with
20 echoes off various things; buildings and cars and anything
21 else. So we needed to know where the cars were so that we
22 could verify where the echos would be coming off various things.

23 Q Now you mentioned a one-to-five scale. Was it a map or
24 a drawing of the area? I didn't catch---

25 A I don't know the distinction. I would call it---

1 Q Well, why did you need that drawing of the intersection?

2 A Oh. We needed, again, a very accurate drawing to know
3 where the buildings were exactly, so we could determine these
4 echoes and where they would come from, and everything else.
5 We couldn't even do the examination until we received that.

6 Q Now would you tell us again what you were initially
7 asked to do in conducting your examination?

8 A I think the best word used was "everything." "Anything
9 you can tell us about the shooting, figure it out. If you
10 can tell us how many gunshots were fired, who fired them, who
11 were they firing at, what kind of guns were being used."
12 Anything we could tell; that was the request of the investi-
13 gators.

14 Q Now prior to conducting your examination, or during the
15 course of your examination at any time, did you speak to or
16 rely upon statements from people who had been at the scene?

17 A No, sir. We--- I mean, when the investigators came in,
18 you know, they came in and said some people said a couple
19 hundred shots were fired, and other people said there was
20 only a couple of shots fired. That just wasn't important to
21 our investigation. It's very independent of other data, so
22 therefore we could independently determine how many gunshots
23 were fired and anything else we could about the situation
24 without other evidence.

25 Q Now you mentioned investigators. But did you go down

1 and attempt to interview any of the people who were in the
2 parade and rally, or any of the other persons who were
3 present at the scene?

4 A No, sir. I really don't even know that much about the
5 case, other than my small part in it.

6 Q Were you told what groups were involved in this inci-
7 dent or the identity of certain persons as belonging to one
8 group or another?

9 A I was advised of the groups involved, but not really who
10 was in what group.

11 Q So when you viewed a videotape during the course of your
12 analysis, had you been given any information that would tell
13 you when you saw a person on that videotape whether he was a
14 member of the parade or whether he was a member of some other
15 group?

16 MR. COOLEY: Objection to the leading, Your Honor.

17 THE COURT: Oh, I'll permit it. Go ahead.

18 A No, sir. I--- You know, I mean, the investigators came
19 up and talked a lot. But, you know, since it was months
20 after we got - they talked to us and we got the information,
21 it just--- When I viewed it, I viewed, you know, a number of
22 people out on the scene. And I don't know their affiliation
23 and some of them maybe have no affiliation. We just viewed
24 it as trying to determine all we could about the gunshot
25 analysis, not what group was firing, if in fact there was a

1 group, or what; just who - you know, how many gunshots were
2 fired, who in particular was firing them, and any other
3 information we could get from the scene.

4 Q As you sit here on the stand today, Mr. Koenig, do you -
5 are you familiar with the names of the people you see in
6 those videotapes, or the groups with which they were
7 affiliated?

8 A Again, I can name the groups, but I can't put people
9 from - you know, an individual, and say that person is in
10 some particular group. And the names, I know - I've heard
11 people say them, but I - they really never sunk into me. I
12 can't name many of the people involved in this at all.

13 Q All right. Mr. Koenig, have you ever interviewed any of
14 the defendants that are present in this courtroom?

15 A No, sir.

16 Q Now you testified, Mr. Koenig, as to your opinion con-
17 cerning the quality of the original videotapes brought to you
18 by the cameramen; and you described how you made an audio
19 track from those original films. Getting back to that proce-
20 dure for just one minute, do you have an opinion as to the
21 quality of the audio recording that you took from those
22 original videotapes?

23 A We're fortunate when you make a recording---

24 MR. KEITH: Objection, Your Honor. The originals
25 are not in evidence.

1 THE COURT: Well, I think it's an appropriate
2 question.

3 MR. GREESON: I object simply because he's already
4 asked - answered the question.

5 THE COURT: Well, he may answer. Go ahead.

6 A We're fortunate when you make an audio recording - you
7 usually can't do this with video - you can listen to the
8 signal coming into the tape recorder and you can listen to
9 the signal that's recorded on the tape. And it's just a
10 switch you can flip back and forth. So I was able to listen
11 to the signal coming off the videotape and just flip a switch
12 and I could hear what was actually on the tape I'm recording.
13 That way I could verify that what I was recording was the
14 same information that was coming into the tape recorder. So
15 the quality was excellent.

16 BY MR. LINSIN:

17 Q Now, Mr. Koenig, based upon your experience in analyzing
18 gunshot sounds on other magnetic tapes in other cases, dif-
19 ferent from this, what is the largest single problem that you
20 encounter in conducting such analysis?

21 A The quality is too poor, you just can't make an analy-
22 sis. For instance, a gunshot is recorded over a telephone
23 line, or what's often happening in police matters, it's over
24 a transmitter. In other words, the person has a little
25 transmitter on, it's like a radio. It goes out to a little

1 place and another police officer is recording it. Well, once
2 it goes through that system, the information is so distorted
3 as not to be useful. I mean, you could say a loud sound
4 occurred, but you can't sit there and say, "That was a
5 gunshot."

6 Q And, Mr. Koenig, do you have an opinion of the relative
7 quality of the magnetic tapes that you had to work with in
8 this case as compared to the quality of most other magnetic
9 tapes that you've examined in other cases?

10 A Well, in most cases this quality would be a lot higher.
11 Certainly in some cases, like the Reagan - attempted assassi-
12 nation of President Reagan, we also had excellent quality.
13 But we often do not have such quality, so it limits what our
14 examination could do. So one of the first things we wanted
15 to look at in this case is, is the quality good enough. If it
16 wasn't, we wouldn't have made any examination.

17 Q And what significance did this have for your examination
18 in this case?

19 A The quality being good?

20 Q Yes, sir.

21 A Oh. It allowed us to then proceed forward and do many
22 of the exams that are possible and that have been done in such
23 cases where you do have high quality, for us to make a lot
24 of, you know, determinations as to how many gunshots were
25 fired and what's a gunshot and what's not a gunshot. So we

1 were very fortunate to have such quality in this case.

2 Q Now, Mr. Koenig, you said that when you spoke with the
3 cameramen who had been present on the scene, you obtained
4 information as to the type of recorders they were using and
5 the type of microphones that they were using at Everitt and
6 Carver.

7 Do you have an opinion, sir - let's first talk about the
8 Channel 11 equipment that was used by Mr. Boyd.

9 A It's a high-quality, standard Sony video recorder.

10 Q Is it a broadcast quality recorder, sir?

11 A Yes, sir, it is.

12 Q And what about the microphone, sir?

13 A The microphone came with that camera and would be of the
14 same quality as the camera.

15 Q Now did - when you spoke with Mr. Boyd, did he tell you,
16 sir, whether or not his microphone was connected to a cable,
17 whether he had an additional microphone connected to a cable
18 on that day?

19 MR. HARWELL: Objection. Your Honor, the witness
20 has not yet testified, I don't believe, that he---

21 THE COURT: Boyd is available.

22 MR. HARWELL: He just said in general that he
23 talked to cameramen.

24 THE COURT: Well, Boyd is available, so this
25 wouldn't be, strictly speaking, hearsay. Is that your

1 objection - hearsay?

2 MR. HARWELL: Yes, sir.

3 THE COURT: Is your objection a hearsay objection?

4 MR. HARWELL: Well, my objection is really that he
5 hasn't testified that he spoke to Mr. Boyd. He said he spoke
6 to cameramen and there were four involved.

7 THE COURT: Well then, you can rephrase the
8 question. Ask him if he talked to Mr. Boyd.

9 BY MR. LINSIN:

10 Q Mr. Koenig, when you spoke with the cameraman from
11 Channel 11, did he inform you as to whether or not he had an
12 additional microphone connected to a cable?

13 MR. KEITH: Your Honor, objection to leading. That
14 is the most classic example I've ever heard.

15 THE COURT: Overruled. Go ahead.

16 A Actually I talked to two people. I talked to a Edward
17 Royal Boyd, he was the Channel 11 cameraman; and Matt
18 Sinclair, who is a news reporter. And they advised me that
19 the microphone was on a ten-foot cable and that usually it
20 was like five to six feet to the right of the camera. And
21 the news reporter said he normally had the microphone in his
22 hand. And he said, once the shooting started, he got very
23 close to the cameraman. He said they were crowded quite
24 close together by the car down there.

25 MR. KEITH: Objection and move to strike.

1 MR. COOLEY: Objection and move to strike, Your
2 Honor.

3 MR. KEITH: They said they were not going to put
4 this down when he testified, so this is not going to come in
5 as---

6 THE COURT: I'm going to permit it. It's
7 overruled. Go ahead.

8 MR. LINSIN: Thank you, Your Honor.

9 BY MR. LINSIN:

10 Q Now did you receive any information as to whether or not
11 one or both of the microphones utilized by Mr. Boyd and Mr.
12 Sinclair were in operation on that day?

13 A They specifically told me that they were using just the
14 one mike on the cable. And I asked if they were using the one
15 also on the camera, or a separate one there or something; and
16 they said sometimes, you know, at times they would attach the
17 one with the cable onto the mike - onto the camera itself.
18 But that day it was separate, and that was the only microphone
19 that was being used.

20 Q Okay. And on what date did Mr. Boyd and Mr. Sinclair
21 tell you that, sir?

22 A January 9th, 1980.

23 THE COURT: You can pick a convenient time for
24 recess. Is this such a time, or do you want to proceed?

25 MR. LINSIN: We can certainly break here, Your

1 Honor. Yes, this would be fine.

2 THE COURT: All right. Let's break here and come
3 back in an hour, which will be about seven minutes after
4 1:00. And then as I indicated, we'll go on till 3:00 o'clock
5 and then I'm going to adjourn. All right.

6 (Luncheon break at 12:05 P.M.)

7 - - - - -

8 AFTERNOON SESSION

9 1:05 o'clock P.M.

10 THE COURT: Mr. Cooley, did you want to raise a
11 point?

12 MR. COOLEY: Yes, Your Honor, very briefly. I
13 would like at this time to make a motion to strike that por-
14 tion of Mr. Koenig's testimony with regard to what
15 Mr. Matthew Sinclair told him when Mr. Sinclair was in
16 Quantico, Virginia, specifically having to do with the camera
17 and microphone equipment. The basis for my motion to strike
18 as for my objection contemporaneously is Rule 802 and 803, in
19 that it is hearsay. It's clear that Mr. Koenig was allowed
20 to testify for the truth of the matter, sir, and that is the
21 location of certain persons and the microphone at the time
22 the filming was being permitted.

23 There is, so far as I can tell, no basis under Rule
24 803 that would be an exception to the hearsay rule that would
25 permit this, specifically Subsection 24, which in some cases

1 permits evidence which is more probative over the point than
2 anything else that's reasonably available. Here, reasonable
3 efforts have not been shown or conveyed to us concerning
4 obtaining Mr. Matthew Sinclair. It's simply been represented
5 that Mr. Sinclair will not be called by the government as a
6 witness.

7 Furthermore, we were not given any advance notice
8 that the government was going to propound this kind of evi-
9 dence. It simply came in and we were totally surprised with
10 it.

11 THE COURT: Well, is this testimony of any real
12 significance?

13 MR. COOLEY: Yes, sir. It is extremely
14 significant.

15 THE COURT: How is that?

16 MR. COOLEY: Mr. Greeson, would you like to address
17 the significance of that?

18 MR. GREESON: When Mr. Boyd testified, Your Honor,
19 he testified that no, he did not tell the FBI that the
20 microphone he was using could have been anywhere from eight
21 to fourteen feet away from the camera.

22 Mr. Koenig has testified twice. Nowhere in his
23 testimony has he mentioned that he knew anything at all about
24 the microphone being separated from the camera. In fact,
25 he's testified, I believe - and I don't have it before me,

1 and I could be wrong - he has testified that the microphone
2 was attached to the camera. It's obvious from---

3 THE COURT: Yes, but what---

4 MR. GREESON: Excuse me. It was obvious from
5 Mr. Boyd's testimony yesterday that that was not a fact that
6 Mr. Koenig took into consideration, and that's the reason why
7 it's very important. A discrepancy of the placement of the
8 microphone, in this case of eight to fourteen feet, would
9 just be absolutely phenomenal. It would change all of the
10 calculations that he made.

11 THE COURT: Well, what did Boyd testify?

12 MR. GREESON: Boyd testified he did not tell the
13 FBI anything about where his microphone was.

14 THE COURT: Well, what did he testify about it con-
15 cerning where the microphone actually was? What did Boyd
16 say?

17 MR. GREESON: He said it was attached to a cord and
18 Mr. Sinclair was holding it at some distance from him. And
19 we asked him how far away Mr. Sinclair was and he seemed to
20 indicate that he had a third eye in the back of his head, he
21 could see him, which of course can be argued, but that the
22 cord was as much as fourteen - he could be as much as four-
23 teen feet away from him, because the cord was that long and
24 would have allowed him to be there. But he didn't keep his
25

1 eyes on him at all times and he didn't know where he was.

2 THE COURT: All right.

3 MR. LINSIN: Your Honor, I believe Mr. Boyd's
4 testimony was that he did recall that Mr. Sinclair was fre-
5 quently close to him and did frequently bump into him, as a
6 matter of fact. He did testify that the cable mike was ten to
7 fourteen feet, I believe, and that it might have been
8 stretched over a car - car's width, but he doubted it because
9 there would have been tension on the cable.

10 In any event, Your Honor, the United States would
11 submit that the type of data to which Mr. Koenig has
12 testified, the data he collected preliminary to his investi-
13 gation in this case, is explicitly admissible under Rule 703
14 of the Federal Rules of Evidence. It is precisely this type
15 of data upon which an expert is permitted to base his opinion,
16 and the United States would submit that the facts and cir-
17 cumstances surrounding how a magnetic tape was recorded does
18 come - does fit perfectly within the requirement in Rule 703,
19 that it is the type of information reasonably relied upon by
20 experts in this field of magnetic tape analysis when they
21 conduct their analysis of magnetic tape. We would submit
22 that for that purpose, of informing Mr. Koenig as to the cir-
23 cumstances under which these magnetic tapes were recorded,
24 that it is something he reasonably relied upon in forming his
25 opinion, and he of course is subject to cross examination as

1 to those conversations, but we submit that Rule 703 does per-
2 mit its admission.

3 THE COURT: All right. I've heard enough on it.
4 I'll rule that it's admissible under Rule 703. I'll deny the
5 objection.

6 All right.

7 MR. COOLEY: Your Honor, I'd like also to object,
8 while the jury is still out---

9 THE COURT: All right.

10 MR. COOLEY: ---to the introduction of D-24, which
11 is a chart which has been prepared by the government to
12 illustrate the testimony of Mr. Koenig, for the same reason
13 that we've objected to all the other view charts. It's out-
14 side the period of time in which these exhibits were supposed
15 to be prepared and shown to the defense. It has been shown
16 to us several days ago, but it - and about a week or so ago,
17 I can't remember exactly when, a small drawing was shown to
18 us. However, that was long past the deadline set by this
19 court, and for that reason we object to D-24 as well.

20 THE COURT: All right. I'll overrule the objec-
21 tion. It can be used.

22 Bring the jury in, please.

23 (Jury in at 1:20 P.M.)

24 BY MR. LINSIN:

25 Q Mr. Koenig, we were discussing before the luncheon

1 break, conversations you had with Mr. Edward Boyd of Channel
2 11 concerning the types of equipment that he utilized on
3 November 3rd, 1979. Did you have a similar conversation,
4 sir, with a Mr. Waters from Channel 8, concerning the types
5 of equipment that he utilized in filming the videotape being
6 shot?

7 A Yes, sir.

8 Q I'm sorry. Mr. Waters from Channel 2, is that
9 correct?

10 A Yes, sir.

11 Q What did he inform you as to the types of equipment he
12 used and the circumstances under which the videotape was
13 filmed?

14 A He again said he was using professional video broadcast-
15 quality recorders - recorder.

16 Q Did he tell you anything as to his microphone?

17 A It was my understanding the microphone was attached to
18 the camera itself.

19 Q Did he tell you what type of microphone he was using?

20 A I don't think he knew. He told me the type of tape
21 recorder, but not the type of microphone.

22 Q Did Mr. Boyd tell you what type of microphone he had
23 been using on November 3rd?

24 A Not specifically. He said it came with the equipment
25 they used on that type of video recorder.

1 Q Did he tell you whether it was a directional or omni---

2 MR. COOLEY: Objection to the leading, Your Honor.

3 MR. HALL: I understood he didn't know - tell him
4 what kind it was.

5 THE COURT: Well, why don't you ask him what kind
6 he might have told him he used?

7 MR. LINSIN: If I might, Your Honor, let me
8 rephrase the question a different way.

9 THE COURT: All right. Rephrase it.

10 BY MR. LINSIN:

11 Q In your opinion, Mr. Koenig, given what you understood
12 as to the circumstances at the scene at Everitt and Carver on
13 November 3rd, what difference might it have made for the pur-
14 poses of your examination, whether the microphone that was
15 used was a directional microphone or an omnidirectional
16 microphone.

17 MR. GREESON: We object to that, if Your Honor
18 please. He's already testified that he didn't know anything
19 about the scene.

20 THE COURT: Oh, I think he can ask the question.
21 Go ahead.

22 Do you understand the question?

23 THE WITNESS: Yes, sir.

24 THE COURT: All right. Go ahead.

25 BY MR. LINSIN:

1 Q Please speak up, if you would, Mr. Koenig.

2 A There are many types of microphones. Two of them were
3 standard types, or an omnidirectional. That means it kind of
4 picks up everything happening in the room. For instance,
5 this would be an omnidirectional-type mike (indicating).
6 It'll pick up someone over there as well as it will pick up
7 someone over here.

8 These types of mikes, though this could be omnidirec-
9 tional, tend to be a little more directional. They'll aim in
10 a certain direction. However, even directional mikes aren't
11 that directional. In other words, if this was a directional
12 mike and I pointed it directly at me, and somebody talked over
13 there, you'd probably still pick it up on the microphone.

14 In fact, I'm involved with some microphone designs to
15 try to make extremely directional mikes, where we're
16 interested in sitting here and picking up a conversation, you
17 know, half a block away. It's very difficult to design such
18 microphones.

19 Getting back to your question, when you have a very loud
20 sound, the kind of sounds we were looking at in this matter,
21 the directionality of the microphone would have very little -
22 make very little difference, because the sound was so loud.

23 Q During the course of your examination in this case, Mr.
24 Koenig, what--- Well, first of all, how long did your exami-
25 nation take in this case?

1 A Well, we received some of the original tapes in
2 November, some of the copies in November of 1979; and the
3 date of my main report on this thing went out in August of
4 1980. So about ten months.

5 Q And during the course of that examination, what general
6 categories of information were you able to determine as a
7 result of your investigation?

8 A In the analysis?

9 Q Yes, sir.

10 A We were able to determine what was gunshots and what was
11 something else, like something just banging a mike or somebody
12 hitting a car or something. We were able to determine from
13 that how many gunshots, totally, were fired at the scene. We
14 were able to locate all but three and determine where they
15 were fired from. And some of those, from visual information,
16 you can tell actually who fired it.

17 Some of the gunshots we were able to determine if they
18 were supersonic or not. In other words, the bullet traveled
19 faster than the speed of sound. Those you couldn't always be
20 as exacting on, so it was much more difficult to be defini-
21 tive on many of the shots.

22 Q Sir, with regard to the first category of information
23 you were just discussing, the number of gunshots that you
24 were able to identify, can you tell us whether in making that
25 determination you relied upon the videotapes as well as the

1 audiotapes, or did you just examine the audio portion of
2 those videotapes to determine how many gunshots were fired
3 that day?

4 A We only used the audio portion to determine that.

5 Q Now would you briefly describe to the jury the proce-
6 dures, the steps you went through in making that
7 determination?

8 A Yes, sir. The sound waves that I've mentioned briefly,
9 that's - we looked at to determine what was a gunshot and
10 what was something else. So we had to have a visual display
11 of this wave form, as we call it. Okay. So - again I men-
12 tion, like in a hospital scene, you see the hearts beating on
13 this monitor; well, we can put that onto paper, six-inch wide
14 or twelve-inch wide paper, and spread that out. In fact,
15 most of the exams here were done with - spread out to the
16 point that I have resolution of better than one ten-
17 thousandth of a second.

18 Okay. From that I can actually look at the sound that
19 the gunshot blast itself makes. It's very unique in the type
20 of sound it makes, for a number of reasons. First off, if
21 it's supersonic, that is preceded - since it's supersonic,
22 it's moving faster than the speed of sound. In other words,
23 the gunshot goes off and before the sound of that gunshot can
24 go off, the bullet is faster than that sound and actually gets
25 there before the sound of the blast does. So you get this

1 particular wave, and it's called an end-wave, that shows
2 that that bullet is supersonic. Okay. Only a supersonic
3 projectile would have an end-wave.

4 The end-wave would sound like a sonic boom. I remember
5 when I was a kid, they used to still fly jets across the
6 country and they'd once in a while, you know, break the sound
7 barrier and you'd hear this boom. Well, that's what's hap-
8 pening with a bullet. Now a bullet is much smaller than an
9 air force jet so the sound is not going to be as loud, but
10 it's a sound that a lot of people perceive as a crack of a
11 rifle. That's the blast. But the crack itself is a very
12 sharp sound.

13 So only a bullet being fired supersonically would have
14 that. So if we found that characteristic, that alone was
15 almost enough to say it had to be a gunshot sound. You can't
16 bang a car so hard that it's going to be supersonic; that's
17 impossible to do. Okay.

18 Second, a gunshot blast is extremely high amplitude,
19 short duration. In other words, it occurs very quickly and
20 it's very loud. Okay. It's very unique. If you look at the
21 wave-form and you come along and there's no sound at all and
22 just, wham, it goes straight up and then it comes straight
23 down again. Okay. Other sounds, like banging the
24 microphone, banging the side of a car, even a firecracker or
25 a car backfiring do not rise as fast. They're just not as

1 sharp a sound. We've even run tests with things like mili-
2 tary ballistics and explosives, and we can't get anything
3 else to look exactly like a gunshot blast.

4 So what we look for is this - again, this set of very
5 sharp rise, very quick fall-off, high amplitude, this end-
6 wave if it's supersonic - not all gunshot blasts are - and we
7 look at--- For instance, you get a set of echoes. In other
8 words, if you make a very loud sound, as you heard before,
9 it'll bounce around the courtroom. Okay. Well, most loud
10 sounds do that, so that's not a real help. But the point is,
11 if somebody just banged a microphone, which happens on the
12 tape, there wouldn't be any echoes. All you're hearing it is
13 internally in this microphone, and it doesn't echo.

14 So if we see a sharp sound and there's nothing after it,
15 it's just very clean, most likely it's just somebody bumping
16 the microphone.

17 The other thing we do is we listen to it very carefully,
18 not at normal speed. Again, it's very difficult to tell
19 just listening to something at regular speed. We slow the
20 tape down, like, to one-sixteenth speed or even slower, and
21 listen to it. And what happens, there's a lot of sounds that
22 sound very sharp that aren't sharp anymore. And people - it
23 sounds like - they're talking so slow it almost sounds like
24 they're - like a cow mooing out there. It's a very funny
25 sound. And - but these other sounds that sounded like some-

1 body really - like (demonstrating) just banging like that,
2 now when you hear it at slow speed, it's like
3 (demonstrating). But that gunshot blast is still sharp; it's
4 very, very sharp.

5 So we went through and looked at all of the Channel 2
6 and Channel 11 tapes at anything that could be a gunshot.
7 And when I went through the first time on each one found
8 about fifty-some that I thought could be. And we ran them at
9 low speed, we only ran - barely - a resolution of maybe one-
10 hundredth-of-a-second type of resolution. Then we took all
11 of these that we thought there was any chance it could be a
12 gunshot and ran it at very high resolution.

13 To give you an idea, the paper coming out of the machine
14 the paper is twelve inches wide - it comes out of the machine
15 at 200 inches per second. You know, you really don't want to
16 stand in front of this thing, it will hurt you. And it
17 allows us to take--- In other words, you get 200 inches of
18 paper for one second of sound. So we just spread this out
19 all across our floor there in our laboratory and look at
20 what's there. And from this we can see this very sharp rise
21 time, its end-wave characteristics from supersonic, the very
22 quick fall-off; and everything else looks different.

23 And to ensure this, we've run loads of tests over the
24 years. We ran a whole set of tests with the general type of
25 weapons used in this matter, put microphones in all kinds of

1 different directions, fired them over the mikes, into the
2 sides of the mikes, and everything we could think of; ran
3 hundreds of tests to ensure that. And in every case we could
4 pick out gunshots from non-gunshots, and the gunshots were
5 very, very unique.

6 So then we went through this whole thing and picked out
7 a total of 39 gunshots, and we timed each one over the length
8 of time they were shot at the scene.

9 Q Now, Mr. Koenig, you've referred to these sharp-type
10 movements on the audio portion, the graph you see of this
11 audio portion. What do you call these sharp movements in the
12 waves there?

13 A We call very sharp sounds "transient" sounds, very - in
14 normal--- I guess in normal, non-scientific language,
15 that would mean a very short happening. And in technical
16 terms again, it means a very, extremely short sound that
17 occurs.

18 Q And, sir, what do you call the type of graph that you
19 were describing where you were able to print out at up to 200
20 inches per second?

21 A A visicorder graph, v-i-s-i-c-o-r-d-e-r.

22 Q Now you testified that you had initially identified 50
23 or above 50 transients on the audiotapes from Channels 2 and
24 11, is that correct?

25 A Yes, sir.

1 Q Now can you describe the procedure that you went through
2 to determine which of those transients were actually
3 gunshots?

4 A Okay. We ran them at this very high speed on the visi-
5 corder, this paper spreading, like I said, 200 inches of
6 paper for each second, and visually looked at them, looked
7 for things like end-waves, looked at how the transient peak
8 came up, and then also listened to it at the slow speed, and
9 really spent a lot of time. It wasn't that difficult.
10 Gunshots are very unique. So it's not like we had to sit
11 there and agonize for two days over whether something was a
12 gunshot. Once we got sufficient resolution to be able to run
13 something like that, we did it.

14 In fact, we have kind of a special visicorder. If you
15 think of a visicorder, most visicorders are mechanical in
16 nature. They have a pin that moves up and down on the paper.
17 Well, you can imagine, that could be a real problem when
18 you're running this paper at 200 inches per second. The pin
19 won't move fast enough. So we have had developed, with the
20 army, a special visicorder. It's a dual-channel type that's
21 optical. In other words, it's a light wave that moves across
22 the paper, which you can move very, very quickly. That
23 allows us to look at transient responses. That's what that
24 type of equipment is made for and that's what the military
25 also uses it for.

1 Q And the analysis you conducted on these audiotapes uti-
2 lized an optical visicorder, is that correct?

3 A Yes, sir.

4 Q Now how were you able to determine, Mr. Koenig - or were
5 you able to determine, sir, whether or not two gunshots had
6 been fired at exactly or identically the same second at the
7 scene at Everitt and Carver?

8 A Okay. That's an excellent question.

9 First off, we have extreme resolution. In other words,
10 it would have to have been fired within one ten-thousandth of
11 a second of each other. We really ran a few tests to just
12 see if we could do that mechanically and what happens is, the
13 trigger mechanisms on guns are such that even though you pull
14 the trigger exactly the same, the bullet doesn't explode
15 exactly the same. I mean, to you listening to it, it does;
16 but when you start graphing it out, you can see a difference.
17 Okay.

18 Second, these shots produce echoes. And if they're shot
19 at the same time, even if they're a couple inches apart, you
20 would get a different set of echoes.

21 Third, what if one was supersonic and one wasn't? You'd
22 end up with this kind of funny-looking peak. You know, they
23 should both be the same.

24 Another problem is that you would tend to have two shots
25 fired at the same time, they wouldn't be right next to each

1 other. They wouldn't have the guns sitting against each other.
2 One would be over here (demonstrating) and one would be over
3 there someplace. Well, remember, I talked about the speed of
4 sound? Okay. If you figure that speed of sound is approxi-
5 mately one foot every one-thousandth of a second, well, what
6 if one of those guns had fired at exactly the same time was
7 one foot apart, one foot farther away from the microphone
8 than the other one. Then it would arrive one millisecond,
9 one-thousandth of a second later. And we're talking - we
10 have ten thousand - one ten-thousandth of a second resolu-
11 tion; therefore, we'd immediately spot it.

12 You also have other problems. What happens is, the
13 wave-forms kind of interact with each other and they produce
14 a funny wave-form. You know, you'd look at it and you'd say
15 there would be something wrong with it because you'd never
16 get the phase exactly right. And it was a problem that we
17 really spent a lot of time on to ensure that that could not
18 happen. And it was our opinion that it would be virtually
19 impossible for us to miss a second shot. The odds of
20 simultaneous shots are unbelievable. Some of our stuff here
21 are only tenths of a second apart, and we easily resolve
22 that. I mean, a tenth of a second apart to us is almost
23 forever on these charts; you're talking about feet of paper
24 apart. So the chance of a simultaneous gunshot and for us
25 missing it that way are virtually zero.

1 Q Now, Mr. Koenig, what were the chances of your having
2 missed a gunshot because the gun might have had a silencer on
3 it?

4 A Our laboratory and other people in the laboratory divi-
5 sion do a lot of work on silencers. There's a - we've got to
6 determine if something is a silencer, somebody is charged
7 with the offense of having a silencer, which is illegal.
8 We've got to prove it's a silencer. Just because it screws
9 on the end of a barrel of a gun doesn't mean it silences a
10 gun. So we test it to see if it reduces the amplitudes suf-
11 ficiently. Okay.

12 A good silencer might reduce the amplitude 20 decibels,
13 that's kind of a terminology we use for how loud something
14 is. Okay. When you figure a gunshot that's fairly close
15 might have an amplitude of, let's say, a hundred and twenty
16 decibels, that would be about the same as what my kids play
17 rock and roll on their - you know, their radio at home; very,
18 very loud. Right? Okay.

19 If you reduce it to a hundred, to you, you would say
20 that music is still extremely loud. It's just not - you
21 know, you're not getting a headache when you stand there for
22 a couple of minutes. It does--- A silencer, no matter what
23 the movies show, don't silence a gun from very loud to very
24 soft. It reduces it somewhat, and that's all it does. If it
25 tends to reduce it more than that, what happens is, it knocks

1 the bullet all over the place. In other words, it wouldn't
2 even be accurate at 20 feet. So you'd almost have to put the
3 gun up against somebody's head if it reduced it much more
4 than that. And these are the results of hundreds of tests on
5 silencers. We do most of the tests, I think, for the law
6 enforcement agencies in this country, for that. So a
7 silencer would have minimal effect in amplitude.

8 Q In your opinion, Mr. Koenig, is it possible that you
9 missed a shot because a gun had been employing a silencer
10 mechanism?

11 A No way.

12 Q Now how many gunshots did you conclude, Mr. Koenig, were
13 fired at the intersection of Everitt and Carver on November
14 3rd, 1979?

15 MR. GREESON: Objection. I assume he means does he
16 have any opinion about that.

17 THE COURT: Yes. Do you have an opinion?

18 THE WITNESS: Yes, sir.

19 THE COURT: Do you have an opinion?

20 BY MR. LINSIN:

21 Q What is your opinion, sir?

22 A There were 39 gunshots fired on that tape - recorded on
23 that tape.

24 MR. HARWELL: I'm sorry, Your Honor. I didn't hear
25 the full response.

1 THE COURT: What was the response?

2 THE WITNESS: There were 39 gunshots recorded on
3 that tape.

4 MR. HARWELL: Thank you.

5 BY MR. LINSIN:

6 Q After determining the number of gunshots, Mr. Koenig,
7 did you make any attempt to correlate that information with
8 the visual information that appeared on the videotapes?

9 A Yes, sir.

10 MR. LINSIN: May we set up our exhibit?

11 MR. GREESON: If Your Honor please, although we
12 don't object to Mr. Koenig's testimony, we do object to this
13 exhibit and we'd like to be heard on it.

14 THE COURT: All right. Do you want to come up?

15 (Bench conference on the record.)

16 MR. GREESON: Your Honor, I don't know if you're
17 going to be able to see this thing. Your Honor, he's going
18 to testify - he's going to testify to the time code at which
19 the shot occurred. I don't object to that. He's going to
20 testify that these are the numbered 39 shots. There's
21 nothing wrong with that. What I object to is this gray area
22 here, this gray area here, and this gray area here, along
23 with this white area and this white area (indicating).

24 MR. HALL: And the blue and the orange designation
25 of who did it.

1 MR. GREESON: They have been placed there by the
2 government to illustrate something that they want to argue to
3 the jury and has absolutely nothing to do with Mr. Koenig's
4 testimony. What I'm arguing to you is that it's a distorted
5 exhibit. It is presented the way the government wants to
6 present it, not the way the witness is going to testify.

7 THE COURT: What does the gray area allegedly
8 depict?

9 MR. GREESON: Well, they're going to argue to the
10 jury that this - that that was an important eight seconds, for
11 some reason within their own heads, the same with this four
12 seconds (indicating), the same with this eight seconds; and
13 it fits into their theory of the case, if Your Honor please,
14 not the facts that this witness is going to testify to. I'm
15 against distorted exhibits in every instance that they
16 appear, and this one is horribly distorted.

17 MR. HALL: Furthermore, Your Honor, this places -
18 this purports to place, and that isn't in evidence yet. He
19 hasn't testified about placement or location.

20 MR. COOLEY: He hasn't even said how he can locate
21 these shots yet.

22 MR. HALL: He hasn't even said that he can locate
23 them.

24 MR. LINSIN: He has testified, Your Honor - the
25 witness has testified that one of the areas that he made

1 findings in was the location of these gunshots. The witness
2 will testify that the information contained on the left-hand
3 column adequately summarizes his location findings. Now
4 we'll go into greater detail as to his findings on location,
5 but the witness will testify that those are - those
6 accurately summarize the findings that he has already
7 testified that he has made as to location of gunshots.

8 THE COURT: Well, based on that proffer, I'll let
9 the exhibit in over your objection.

10 MR. GREESON: It's just not admissible, Judge.

11 THE COURT: What do you say about the gray area?

12 MR. LINSIN: Your Honor, the government has a duty
13 in this case, Your Honor, to bring before the jury those
14 facts which occurred during this incident that we believe to
15 be important. Now the identification of placements of the
16 shots and the separating out of a certain series of shots is
17 a step in that process, Your Honor, and we feel that we have
18 the duty and are entitled to make demonstrative charts that
19 attempt to make the massive amount of scene information
20 recognizable and understandable by this jury.

21 MR. GREESON: The only thing---

22 THE COURT: I'll tell the jury at the appropriate
23 time what a demonstrative exhibit is.

24 MR. BALL: Up to this point Mr. Koenig has only
25 testified he has identified 39 shots. He hasn't testified

1 that he even has the ability to place them on the ground.
2 This exhibit purports to say where they were fired from.

3 THE COURT: The government has made a proffer that
4 it is going to be able to do that.

5 MR. LINSIN: And the witness has, in fact, already
6 testified that the location was one of the areas where he
7 made findings, that he was able to place all but thirty.

8 MR. BELL: All but "three."

9 THE COURT: I'm going to tell the jury what a
10 demonstrative exhibit is at the appropriate time, that it
11 purports to be a summary of the witness's testimony. Whether
12 this jury wants to accept this or not is up to them. They
13 can reject all of it.

14 MR. GREESON: That's my whole point.

15 THE COURT: Well, I'm going to tell them that.

16 MR. GREESON: The gray areas are not - it's not his
17 testimony, though, Judge.

18 THE COURT: I'm going to tell them that. I'll tell
19 them.

20 MR. GREESON: It's the government's gray area; they
21 put them up there. Are you going to tell them that?

22 THE COURT: I'm going to tell them that this is
23 what you call a demonstrative exhibit. It purports to show
24 what the witness has testified to. If they don't believe the
25 witness, if they don't believe that his opinion is worthwhile

1 of acceptance, well then, they don't have to accept this.
2 This just purports to be his view of what the evidence shows.
3 They're not bound by what's on this chart. It's just an
4 exhibit.

5 MR. GREESON: Okay. We respectfully accept, Your
6 Honor.

7 THE COURT: All right.

8 (End of bench conference.)

9 MR. LINSIN: Your Honor, may the witness step down?

10 THE COURT: Yes.

11 Now, ladies and gentlemen, this is what we call a
12 demonstrative exhibit. The witness, I presume, will testify
13 in certain matters; and what's reflected on this chart pur-
14 ports to be what his view of the evidence is and what his
15 opinion shows. Now you're not bound by what appears on this
16 exhibit. This is just the witness's opinion. You can look
17 at that and you can view his testimony, at some future time
18 you might look at that chart and say, "I reject all of it."
19 So you're not bound by what's on there. Do you understand
20 that? Or you may accept all, that's up to you. You are the
21 judges of the facts.

22 All right.

23 BY MR. LINSIN:

24 Q Now, Mr. Koenig, you've testified that after determining
25 the number of gunshot sounds that were recorded on these

1 videotapes, that you then viewed the visual portion of those
2 videotapes and determined certain additional facts. Were you
3 able, sir, to determine the times that those gunshots
4 occurred?

5 A Yes, sir.

6 Q All right. Would you stand to that side of---

7 I show you what has been marked for identification as
8 Government's Exhibit D-5, and I would ask you to - beginning
9 with this column right here (indicating), explain to the
10 Court and the members of the jury what conclusions you made
11 as to the time at which these gunshots were fired. And
12 first, if you would, describe the significance of the numbers
13 contained in the upper portion of this diagram.

14 MR. GREESON: I assume, once again, he's asking for
15 the witness's opinion, Your Honor. I object to the form of
16 the question.

17 THE COURT: Yes. This is all opinion testimony,
18 and you heard me explain that an expert may express an
19 opinion. So this gentleman is expressing his expert opinion
20 on these matters, which you may either accept or reject. All
21 right.

22 BY MR. LINSIN:

23 Q Please go ahead.

24 A Okay. I timed these 39 gunshots, really, two ways.
25 One, out into milliseconds. Very, very short durations.

1 Then I related that to the time code that was imprinted on
2 the Channel 11 videotape. So, really, this timing is, in my
3 mind - I mean, it's accurate as far as the time code is on
4 the videotape. But that's not as accurate as actually my
5 research showed. So this tells you where on the videotape it
6 occurs. So what I did was, this starts at 11:28:12 in the
7 time code off the videotape. That has nothing to do with
8 the time of the day. That's just the numbers for the
9 videotape. And it runs all the way up to 12:56:23.

10 And if you do a little bit of arithmetic there, it runs
11 a little bit over 88 seconds. So all 39 gunshots were fired
12 in a little over 88 seconds. So what this is, is I put the
13 time the shots occurred on the videotape.

14 Now often you don't see anybody shooting on the
15 videotape at that time, it's just - that's when it occurred.
16 So then we have 39 gunshots as listed. A shot at 11:28:12
17 was the first one, was one. At 11:50:25, which you note is
18 about 22 seconds later, the second shot occurs. So there's a
19 pretty good break between those shots. Then we go up at
20 about four seconds later, this second is the seconds, we get
21 the third shot and then the fourth and then the fifth. And
22 this just goes right on through here like that.

23 You'll notice, some of the shots are quite close. Where
24 out here, we have five digits apart here. Some gunshots are
25 very, very close in time. I went all the way across every one

1 of these up to the thirty-ninth shot, which occurred at
2 12:56:23.

3 Q Now directing your attention to the left-hand column on
4 this chart, Mr. Koenig, can you tell the members of the jury
5 what that information is?

6 A Okay. From the echoes off the recording, I was able to
7 determine, spatially that is, the location of each of the
8 gunshots, where they occurred. So what was done here was
9 broken down from the shots from the far west part of the
10 intersection. Some were shot from the southeast of the
11 intersection. Some - three I couldn't determine, just--- I
12 know they're gunshots, but they have so few of these
13 reflecting echoes, that I can't even tell you where they came
14 from. I can tell you where they didn't come from, but not
15 positively where they did - where they did come from.

16 Some were from on the - this would be the west side of
17 the 1700 Carver building, some are over by the recreation
18 building, and some were from the south side of the street.
19 In fact, only one was from the south side of the street.

20 Q Now have you had an opportunity prior to today, Mr.
21 Koenig, to examine this chart?

22 A Yes, sir.

23 Q And the times that are contained on this chart?

24 A Yes; they matched our report at the lab.

25 Q All right. Does this chart accurately summarize certain

1 portions of your conclusions?

2 A Yes, sir.

3 Q All right. Thank you. Now, Mr. Koenig, you had made
4 reference to the process whereby you were able to locate, in
5 your opinion, the places from which the shots were fired, 36
6 of the 39 shots were fired. Prior to coming to court today,
7 did you prepare a diagram that would illustrate the method
8 whereby you were able to make the location determinations?

9 A Yes, sir.

10 MR. LINSIN: May the witness again step down, Your
11 Honor?

12 THE COURT: All right.

13 BY MR. LINSIN:

14 Q Mr. Koenig, I show you what has been marked for iden-
15 tification as Government's Exhibit D-24, and ask you to iden-
16 tify that exhibit, sir.

17 A That's an example of how you can do this procedure to
18 determine where a gunshot came from, under excellent
19 recording conditions.

20 Q All right. Utilizing this diagram, Mr. Koenig, would
21 you explain again to the Court and the members of the jury
22 the procedure whereby you were able to locate these?

23 A Okay. When a gun is shot or a gun is fired, the sound
24 goes in every direction. In other words, if somebody is
25 standing in front of you and they shoot a gun off, you're

1 going to hear it behind you, even though they've pointed the
2 gun in the other direction. So sound waves go in all direc-
3 tions. It's like having a nice calm pond and you throw a
4 little pebble into it and it goes out in all the directions.
5 Well, that's what sound does. And if you think about it, it
6 always happens.

7 Now it's more obvious in very loud sounds. Sometimes
8 when somebody is talking and you're behind somebody, you have
9 trouble understanding them. But on loud sounds you hear - a
10 car can backfire three blocks away and you can hear it.
11 Lightning can go off miles away and you can hear the thunder
12 that comes from it. So this sound goes in all directions.

13 Well, some of it goes right from the gun right to the
14 microphone. Now that takes a certain length of time.
15 Remember, we talked about that speed of sound is at a certain
16 speed. Now we determined on that day that the temperature -
17 the speed of sound was 1,113 feet per second. So if you go
18 from here to here (indicating), and we just decided to make
19 that 210 feet, let's just say, it would take about .19
20 seconds, about a fifth of a second to go that distance.

21 Now remember, we talked about that every thousand feet
22 takes about a second. So if you divide it out, it's about
23 200 feet. So a gunshot goes off and you don't even hear it
24 on the microphone until about a fifth of a second later. But
25 again, it's going everywhere. So it bounces up here

1 (indicating), well, there's nothing for it to hit, it just
2 keeps going. It goes straight up, it doesn't hit anything.
3 Well, what happens to this one (indicating), it comes over
4 and hits this building.

5 Q Would you identify the color?

6 A Yes. That's blue, hitting Building B. It hits the
7 building, just like a billiard shot or a pool shot where you
8 have no English on the ball and you hit it and it banks, and
9 we've all seen people that can play pool very well. They
10 know those angles. It has to hit--- If it hits at a certain
11 angle, it has to come off at a certain angle. It's a law of
12 physics; you can't change it. The same thing happens to
13 light. If you shine a light up over here or something,
14 exactly the same thing.

15 When you look at your reflection in the mirror every
16 morning, it has to reflect right back. You don't look in the
17 mirror and your face is over here (demonstrating). It's
18 right in front of you every day. Okay. It's the same way
19 with sound. It's a type of wave, just like light waves. So
20 it bounces off in an exact way. In other words, if it hits
21 here and comes down and these angles match up, it'll come
22 right to the microphone. Okay.

23 There's also a sound wave coming up above that blue
24 line. Well, where does it go? Well, it hits that angle and
25 it comes down here someplace. And one will come over here

1 and hit here and it'll miss the microphone, you won't even
2 hear it. So you say, okay, you hear an echo. Well, what
3 happens to this path? Well, the blue path is a hundred
4 feet longer. In other words, if three - if you started
5 walking, two people at the same speed, one took this path and
6 one took this path, unless the guy on the blue path was a
7 jogger and the other guy was walking, this guy is going to
8 get here sooner. And this one has to go a hundred feet
9 farther, so he would arrive after the original person would.

10 Now you've got one gunshot coming over, we get this nice
11 peak here (indicating); this is what it looks like, the way
12 it--- This other one takes longer to get there. So what
13 happens? You come over to the blue and it arrives five-
14 hundredths of a second later, which to your ear, you might
15 not hardly hear. But there are wave-forms all spread out
16 just like this. See how these are here? We also get it
17 going in, the same way. This is 260 feet. It's 50 feet
18 longer, so it ends up here somewhere in the middle. It's
19 about five-hundredths of a second later. So then you get
20 this gunshot. Here is the original gunshot, and here's these
21 two others. And now you say, "Well, gee. How unique is
22 that?"

23 Well, if you move the gun up here, what's going to hap-
24 pen is, you're going to keep it in the same - this path is
25 the same, and that one gets there in the same distance.

1 You're now closer to this building. So this wave will move
2 slightly. And you're farther away from this building, so
3 this moved one into this way. So what I could do was sit
4 there on a map and say, "Okay. Let's try these positions. I
5 think the microphone was here and I think the gun is there."
6 If I'm wrong, it will not match up. One of the gunshots on
7 there---

8 Can I ask that the jury see the videotapes?

9 Q Well, we'll get to the videotapes, Mr. Koenig.

10 A Okay. So what happens is, if I get anything wrong -
11 let's say I decide the microphone is a certain place, because
12 I think that's where the cameraman was, and I place him here
13 (indicating). I have this wave-form out here and I think the
14 gun went off here. I do a wave-form and I make all the con-
15 nections from the buildings, because I know how they have to
16 bounce off all the buildings, and it won't work. So then
17 I'll say, "Well, maybe I've got the microphone in the wrong
18 place."

19 So I move that over here and I say, "Gee, it's a little
20 bit closer." But obviously I must have--- So finally I move
21 it around and I get the gun in the right position. It
22 matches and it's unique for that position. There's no way
23 that it could be at a different place. It has to be there.

24 Now like I said, we ran tests where I'd move it a foot
25 and I could tell a difference. And if I moved it, backed it

1 up five feet, it wouldn't match at all. That's how accurate
2 this technique is. So you have a set of echoes that
3 accurately defines both the microphone position and the gun
4 position, so that's why I needed to have these charts of the
5 various buildings. I also needed to know where the cars
6 were, because you get a certain amount of deflections off,
7 like car windshields and sides of cars, and then I get these
8 waveforms with all these echoes and I can sit there and
9 define exactly where that gunshot had to occur.

10 Q Now, Mr. Koenig, how did you determine the location in
11 which - the location of the microphone in your analysis of
12 these videotapes?

13 A Okay. The preliminary way was basic photogrammatic -
14 photogrammetric techniques, where you just line the camera up
15 and get that. Now I didn't have to be exact about it.
16 Somebody--- For one reason, the microphone on one of the
17 cameras wasn't even on the camera. It was on a cable away
18 from it. And I was interested in where the microphone was.

19 But when you get into the general area, the approximate
20 area of where the microphone had to be, and then if I had any
21 visual information at all - let's say I thought I saw a
22 person fire at that point, someplace, well, I'd go put the
23 point about where that is. Well, if I did that and they were
24 incorrect, it didn't match, and I didn't have a match. You
25 know, you have a conception that this is what happened, and

1 you run your wave form and that's not what happened. Or
2 because of what's called foreshortening, if I get a picture
3 of this wave - if I use a regular lens or a telephoto lens and
4 take a picture of Mr. Linsin, and I don't know what kind of
5 lens I'd use, I might think he's closer than he is or
6 further away. So visual to me could be confusing. This way
7 they had to match. If I put them in the wrong place, they
8 didn't match.

9 One of the reasons the exam took so long was, some of
10 these shots I had no visual information. I knew approxi-
11 mately where the microphone was. I didn't know where the
12 shooter was; I had no idea. So I'd sit there and say, "Okay.
13 Well, I've got this echo and let's try it this way." And
14 then I'd go put the point there and I'd try it and it didn't
15 work. And then finally you start getting lucky, you know,
16 you've tried enough points. So sooner or later the points
17 started matching and then I'd say, "That's it."

18 And I was fortunate, a lot of the gunshots came from
19 sometimes the same general area. So I'd get a gunshot and
20 I'd say, "Oh, okay. This was fired in the same general area."
21 And then I'd just have to move it a little bit and it would
22 match. It's a basic physics example. It's time-consuming,
23 but not really complicated. It's just simply the echo is
24 going to take longer because they travel farther.

25 Q Did you go through the procedure you've just described

1 in locating each of the 36 shots that you had said you were
2 able, in your opinion, to locate?

3 A There was a couple of shots where there was no echoes.
4 So I got this nice pattern and I looked at this thing and I
5 said, "That's a gunshot." And then there's almost no echoes.
6 Okay. Three of those I couldn't determine. But several I
7 was able to determine because I could see the person firing
8 the gun. I knew the gun went off at that point, I could see
9 where the person's feet were standing on the sidewalk and I
10 could make a decision. There was, I think, two of those, of
11 that type, where I based it entirely on visual. But anybody
12 could see that. You could see the person shooting on the
13 screen. And like I said, I located where his feet were on
14 my map and I was able to place it.

15 Q Now in your determination of the location of these
16 gunshots, Mr. Koenig, did you take into consideration certain
17 potential error rates in the data that you have been
18 provided?

19 A Yes, sir.

20 Q Would you in some detail describe to the Court and to
21 the jury just what you consider to be potential sources of
22 error in the course of your examination and how you factored
23 them into your examination?

24 A Yes, sir. The first error we have is, it was recorded
25 on a videotape. How accurate is the videotape recorder

1 that's being used. We were very fortunate with that.
2 Videotape recorders have to be quite accurate speedwise or
3 they don't work. They start flickering and everything else.
4 So they have to be quite accurate to speed.

5 We got from the manufacturer the maximum speed error
6 that unit could run at. We had to play it back. So there's
7 the second one. We've got the original, whatever errors on
8 that; we've got to play the tape back on something. No
9 matter how good the equipment is, you're going to have a cer-
10 tain amount of error. Again, we talked to the manufacturer.
11 He told us the maximum errors on that. They're not very
12 large, but they're there.

13 Third, we copied it onto another tape recorder. Okay.
14 There's where we kind of ended our errors in the recording.
15 I put a very high quality, accurate time code on with this
16 wave-form information, right up above it. It's accurate. To
17 give you an idea, if you look at these, .23, this thing is
18 accurate to point eight zeros one. It gets so accurate that
19 it really doesn't affect anything.

20 And what we did was make all the measurements from the
21 wave-form up to that coding we had. So even if the tape
22 recorder was off 50 percent, it wouldn't make any difference,
23 because the time code would be off 50 percent, which is
24 adjusted.

25 So there are errors in tape recorders.

1 Second, there's a limit to how accurate I can measure an
2 amount. I mean, I can measure quite accurately, but not per-
3 fectly. You know, you get down and you're talking about one
4 thirty-second of an inch, and you start talking, how accurate
5 can it be between that and a sixty-fourth of an inch. So I
6 had to consider that.

7 The other way we checked our - we went through a few
8 other things, just like for instance, I took the speed of
9 sound at 1,113 feet per second, because this occurred I
10 believe at 11:30 in the morning. The hourly temperature
11 before was 54 and the hourly temperature after was 56, at the
12 airport. So I took 55. But to make sure I was accurate, I
13 made it plus or minus five degrees, that is, we made it 50 to
14 60 degrees, to give myself a very wide error range.

15 So we went through and made any of these corrections we
16 could. We also double-checked. Most of the shots - in fact
17 most of the shots, the two cameramen, the cameramen from
18 Channel 2 and 11, were right near each other. So therefore
19 the wave forms should match up, arriving at those cameras,
20 not exactly the same, they should never do that, but close.
21 You know, it should show that they're within ten feet of each
22 other. I went through all the gunshots. The first gunshot
23 is not on Channel 2, but the rest of them are, and they all
24 match up within ten milliseconds - which I talked about a
25 millisecond or a thousandth of a second is about one foot.

1 All of them run right within that range. And then I just
2 threw in an error factor beyond that, just added on like a
3 hundred percent error, just to make sure. And most of the
4 shots I've determined within plus or minus three feet.

5 The actual accuracy and error rate we think possible is
6 probably plus or minus six or seven inches. But just to be
7 totally confident, in case the map we were using of the area
8 was off a little bit or something, we just made it plus or
9 minus. That was the lowest measurement. Actually, some of
10 the shots, we see someone fire like three shots in three-
11 quarters of a second. I mean that person is just going
12 (demonstrating), pulling the trigger as fast as she could.
13 We could see the slight movement where she moved the gun a
14 couple of inches every time she fired it. I mean, the tech-
15 nique is exceedingly accurate.

16 Q All right, sir. Would you please retake the stand?

17 MR. GREESON: If Your Honor please, I have an
18 objection I'd like to be heard on at this time.

19 THE COURT: All right.

20 (Bench conference on the record.)

21 MR. GREESON: Once again, Your Honor, they have a
22 series of overlays. I have no objection at all to Mr. Koenig
23 going to the map or chart or whatever he wants to use, and
24 putting those shots up one at a time, as he testified to.
25 What they've got is five or six overlays with the shots

1 clustered and pre-clumped like the government wants them, not
2 like---

3 THE COURT: Well, that's what he's going to testify
4 to.

5 MR. LINSIN: That's exactly correct, sir.

6 MR. GREESON: I beg your pardon. He is not going
7 to testify to any clumps; he didn't arrange them in clumps.
8 The government did.

9 MR. LINSIN: That's not true, Your Honor. Mr.
10 Koenig will testify that he placed the shots on these
11 overlays himself.

12 MR. GREESON: Not according to the way the govern-
13 ment wanted them presented, not one through thirty-nine, as
14 he testified.

15 THE COURT: Now wait a minute. If I understand the
16 government correctly, Mr. Koenig is going to testify that he
17 placed those shots on there.

18 MR. GREESON: That's right.

19 THE COURT: And that's what he's going to testify
20 to?

21 MR. LINSIN: I think what Mr. Greeson, sir, is
22 objecting to is the fact that on certain of the overlays we
23 have placed certain of the shots and on other overlays we
24 have placed other shots. And I would mention to Mr. Greeson
25 that the very last overlay contains precisely what he appears

1 to be asking for, and that is an overlay which reflects the
2 placement of all the shots together.

3 THE COURT: He's going to testify---

4 MR. LINSIN: Of course, Your Honor; yes.

5 THE COURT: ---as to the placement of all these
6 shots?

7 MR. GREESON: My objection goes to the government's
8 prepackaging of the testimony so that it is not the testimony
9 solely of the witness, but the testimony of the government,
10 the way it wants it presented. Prepackaging of the exhibit
11 is what I object to, not his testimony.

12 THE COURT: Well, it's prepackaged based on what
13 the witness has told them and what he is going to testify to.

14 MR. GREESON: Yes; and it is ameliorated and
15 augmented and in the manner that the government wants to
16 argue it later.

17 THE COURT: Well, I don't see any objection to it,
18 really. If the witness - you know, the witness is going to
19 testify the shots were here, this is where they are. The
20 mere fact that the government arranges this exhibit ahead of
21 time and has placed those shots based on what the witness has
22 told him, seems to me to be immaterial if they're going to
23 testify to it, in any event. Whether it's on there now or
24 whether you put it on later, they know that to be his testi-
25 mony; that's what they expect it to be.

1 MR. COOLEY: Well, he's not going to testify as to
2 the sequence of the shots, though, Judge. But the way that
3 it has been prepackaged, it appears that the shots occurred
4 in certain sequences. That's what is so objectionable about
5 that chart. That's what objectionable about these overlays.

6 THE COURT: What do you mean "in certain sequence"?

7 MR. COOLEY: Well, they're going to put - first of
8 all, they're going to put a chart up here and it's going to
9 have two shots on it.

10 THE COURT: Yes.

11 MR. COOLEY: And then they're going to put another
12 overlay up there and it's going to have six or seven shots on
13 it; and then they're going to put another overlay on it and
14 we'll have so many more. The impression that it is giving is
15 that these shots occurred in a certain sequence, which is
16 significant to the government's theory of the case but has no
17 relationship whatever to this witness's testimony.

18 THE COURT: Well, certainly on cross examination
19 you can bring out that point, can't you?

20 MR. GREESON: And emphasize it further for the
21 jury, Judge? You know, that puts us in that position, I
22 agree. But we shouldn't be placed in that position.

23 THE COURT: Well, I don't know. Well, I understand
24 what you're saying, but I'm going to overrule the objection.

25 All right.

1 MR. GREESON: Please record an exception, if Your
2 Honor please.

3 (End of bench conference.)

4 BY MR. LINSIN:

5 Q Mr. Koenig, in the course of your examination -- in the
6 course of your analysis, and examination of these videotapes
7 and the acoustical tapes, did you utilize the video infor-
8 mation on both the Channel 11 and the Channel 2 tape?

9 A Yes, sir. We used all the information we could get to
10 try to help us with the exam.

11 MR. LINSIN: All right. Your Honor, at this time I
12 would request that Government's Exhibit 2(b), which has pre-
13 viously been admitted into evidence, be played for the jury.

14 THE COURT: Very well.

15 MR. GREESON: Your Honor, are we going to watch
16 tapes and not see this, so that we can go sit down?

17 THE COURT: Yes.

18 MR. LINSIN: I believe I now have reliable infor-
19 mation, Your Honor. It will take about 25 minutes.

20 THE COURT: This tape will take about 25 minutes.
21 All right.

22 Hold it just a minute.

23 MR. LINSIN: Your Honor, I would request also that
24 during the next portion of Mr. Koenig's testimony, that por-
25 tions of VT1(b) that has been admitted into evidence be

1 displayed for the jury as well.

2 May the witness step down?

3 THE COURT: Very well.

4 (Whereupon, Government's Exhibit 2(b) was viewed.)

5 BY MR. LINSIN:

6 Q Mr. Koenig, before I slide this back momentarily, I'm
7 referring now to Government's D-5. You discussed the time
8 legend that occurs across the top of that. Which channel was
9 that from, sir?

10 A Channel 11.

11 Q All right. And that's the time code that appears on
12 that videotape?

13 A Yes, sir.

14 Q Now, Mr. Koenig, I ask you to examine Government's
15 Exhibit D-10 and the plastic overlay D-1b, both of which have
16 been admitted into evidence, and I ask you if the information
17 contained on Government's D-10 accurately summarizes the
18 information as to the placement of vehicles and the location
19 of buildings at the intersection of Everitt and Carver, upon
20 which you based your examination?

21 MR. GREESON: Your Honor, I believe our objection
22 will show that we've previously objected, but not as to this
23 exhibit, so I would like to simply have that in the record.

24 THE COURT: All right; that will be in the record.
25 Same rule.

1 BY MR. LINSIN:

2 Q This summarizes the underlying maps you were looking at,
3 right?

4 A Yes, sir.

5 Q Now you testified earlier, Mr. Koenig, that when you
6 initially examined the audio portions of the videotapes that
7 you had identified fifty-some-odd transients, but that after
8 further analysis you concluded that there were, in your
9 opinion, 39 gunshots?

10 MR. GREESON: Well, I object to the leading and the
11 repetition and to Mr. Linsin testifying, in effect. He can
12 ask Mr. Koenig the question.

13 THE COURT: Well, I think it's an appropriate
14 question. Objection overruled. Go ahead.

15 BY MR. LINSIN:

16 Q My question, sir, is whether or not on the Channel 11
17 tape, the audio tape from the Channel 11 videotape, whether
18 you identified any transients occurring before what you later
19 determined to be the first gunshot?

20 MR. GREESON: Object to the leading.

21 MR. HARWELL: Object to the form of the question.

22 THE COURT: Overruled. Go ahead. Do you
23 understand the question?

24 THE WITNESS: Yes, sir.

25 THE COURT: Go ahead.

1 A I identified one transient that possibly could be a
2 gunshot, but in further analysis it was not.

3 BY MR. LINSIN:

4 Q How did you rule that out, sir, as not being a gunshot?

5 A Well, I don't remember particularly. But again, when I
6 looked at the characteristics of it--- And on the first run-
7 through we took anything that looked like it could possibly
8 be a gunshot. And then we started blowing them up. We went
9 up to at least - we went up to twenty-five and five-
10 hundredths, centimeters per second. So we went up 20 times
11 the resolution. And when we made that next step, we were
12 able to say definitively it had - could not be a gunshot.

13 MR. LINSIN: Your Honor, I would request a portion
14 of---

15 (Whereupon, a portion of the Channel 11 videotape
16 was viewed.)

17 BY MR. LINSIN:

18 Q Now, Mr. Koenig, do you recognize the videotape we are
19 now viewing?

20 A Yes, sir. This is the Channel 11 videotape.

21 Q Now my question to you, sir--- I will pose a question
22 and then I will ask that we run a portion of this videotape,
23 and I'll ask you to answer the question after the portion of
24 the videotape has been run. The time count as it appears on
25 the videotape at this point is ten minutes, three seconds,

1 and eleven-thirtieths of a second. And my question to you
2 is, given the location of this television camera, between
3 this point in time and the point in time where you have iden-
4 tified the first shot, my question to you, sir, will be
5 whether or not prior to the shot that in your opinion was the
6 first shot fired that day there is any possibility whatsoever
7 that there was a previous gunshot fired somewhere between the
8 location you have identified as being the location of the
9 first shot and the intersection of Everitt and Carver.

10 ALL DEFENSE COUNSEL: Objection.

11 MR. HARWELL: Your Honor, I object because this
12 witness has not testified that there were 39 shots fired that
13 day. He's testified there were 39 shots recorded that day.
14 He hasn't got any information about any shots fired that day
15 that were not recorded.

16 Now Mr. Linsin asked him about the first shot fired
17 that day. This witness is only qualified to testify about
18 the first shot recorded, in his opinion, but not about any
19 shots fired.

20 MR. HALL: And he's obviously cross examining his
21 own witness, if Your Honor please, the way he couched and
22 phrased the question.

23 THE COURT: I'll permit the question. You may
24 proceed.

25 MR. LINSIN: All right.

1 May we view the videotape then, Mr. Blereton, up
2 until the time designated as Shot Number 1.

3 (Whereupon, a portion of the Channel 11 videotape
4 was viewed.)

5 MR. LINSIN: Your Honor, let the record reflect
6 that we have to rewind the tape and we're now viewing the
7 tape.

8 THE COURT: Turn it off a minute.

9 All right. Now what did you want to say,
10 Mr. Linsin? Was there a temporary malfunction in the machine?

11 MR. LINSIN: Yes, there was, Your Honor. We have
12 backtracked somewhat on the tape, and I just wanted the
13 record to reflect that.

14 THE COURT: All right; fine. Start over again.

15 (Whereupon, a portion of the Channel 11 videotape
16 was viewed.)

17 BY MR. LINSIN:

18 Q Do you recall the question, sir?

19 A Yes, sir. There was no gunshot until we reached this
20 point.

21 Q Now, Mr. Koenig, referring to the large diagram that has
22 been designated D-10 and has been accepted into evidence, and
23 the overlay that has been marked as D-10b, I would ask you to
24 refer to both of them, sir, and describe for the jury how you
25 were able, in your opinion, to locate the placement of the

1 first shot that was fired on that day.

2 A On this shot we do have some visual information. When
3 you reach a point where you see some blue smoke---

4 Q Might I just interject that the point on the video to
5 which you are now referring is eleven minutes, twenty-eight
6 seconds, and twenty-one thirtieths of a second. It's
7 actually nine-thirtieths of a second beyond the time you pre-
8 viously testified the first shot had occurred.

9 A We see some blue smoke coming up in one of these. We used
10 a slow-motion video, which is a lot more assistance, and we
11 could see some blue smoke down in this direction
12 (indicating). The cameraman is up in this area. So again,
13 that wouldn't prove that was a gunshot. It could have been
14 anything - blue smoke. So what we did was, just to get it
15 started, we used some of these photogrammetric techniques to
16 try to get it somewhere with the camera - there's a couple
17 of these views right before the shot and after - to try and
18 get an approximation.

19 And then we said, "Well, if this blue smoke is a
20 gunshot," and we don't know at this point, we have to find
21 out. So we started working our way down in the direction to
22 see if we could find any place that matched, again back to
23 this echo analysis. If we're wrong, it'll never match. And
24 we finally were able to match, coming down here to the
25 gunshot going off of the side of the bus. And not only did

1 the echoes match, but a lot of other things. Especially one
2 thing occurred that made sense.

3 This echo off this building right here (indicating) -
4 and here we see the building - it came right off this
5 building here, a very large echo. It was muffled somewhat by
6 this bus. It was still there, but the side of the bus
7 muffled the shot somewhat, which it should have done. If
8 this echo had been very clear, that person couldn't have been
9 blocked by the bus.

10 So the gun had to be either above the bus or behind it,
11 and our echo analysis put it right in that area. And the
12 muffled echo matched it up, so then we worked these positions
13 as best we could to get a placement where Gunshot Number 1
14 had to be. And it was just simply a matter of doing it,
15 drawing all the lines, putting it in one position where we
16 thought it was. If that didn't match, move it slightly,
17 until we finally found an area where it matched, and that
18 ended up being just south of - this is a school bus, Number
19 11.

20 Q Were you, Mr. Koenig, in the course of your analysis,
21 able to identify the person who fired the first shot on that
22 day?

23 A Certainly not that easily. There's some shots right
24 after that of an individual with a gun sticking out of a
25 pickup truck at this location. Again, the timing was such

1 that I can't be positive, because somebody could have come up
2 next to the truck and fired the shot. I have no way of
3 knowing.

4 Q Do you have an opinion as to who fired the first shot on
5 that day, sir?

6 A No, sir.

7 MR. LINSIN: Your Honor, I would just ask
8 Mr. Brereton to slowly advance the videotape so that the jury
9 may view the smoke to which Mr. Koenig has just referred in
10 his testimony.

11 A Okay. Right there (indicating), you can see the smoke.

12 THE COURT: Where? Smoke? Where is the smoke?

13 MR. LINSIN: Well, Your Honor, perhaps Mr. Koenig
14 could point on the video for the benefit of the jury the
15 placement where he sees smoke rising.

16 BY MR. LINSIN:

17 Q And, Mr. Koenig, if you would for the record, sir,
18 describe in as much detail as you can by use of the descrip-
19 tion of the clothing and hats and anything else, the area in
20 which you see smoke rising on the scene.

21 A You're going to be looking in kind of the upper middle
22 third of the screen here, right by this blue hardhat.

23 Q I think, perhaps, if you could step to the side, the
24 Court and perhaps the jury could see.

25 A And what you'll do is, you'll see some white smoke kind

1 of coming off at an angle up in this area (indicating), right
2 there, right in front of his face.

3 Again, when we saw this, we didn't know if it had
4 anything to do with a gunshot. We just started out there
5 simply because if it happened to be, that would help us and
6 assist us in finding it sooner. I realize it's difficult to
7 see. I've looked at this thing thousands of times. But
8 again, even if I had been incorrect, the echoes wouldn't have
9 matched up. So this was just to kind of help us with---

10 MR. HALL: Your Honor, I object to him lecturing
11 without a question.

12 THE COURT: That's all right. Ask the next
13 question.

14 BY MR. LINSIN:

15 Q Mr. Koenig, directing your attention to Exhibit D-10 and
16 the overlay that is now on it--- Well, first of all, would
17 you indicate to the jury where in your opinion the first shot
18 was fired on that day?

19 MR. HALL: Objection.

20 THE COURT: Overruled. Go ahead.

21 A It was found just south of the school bus, which is
22 Vehicle Number 11.

23 THE REPORTER: Just south of the school bus?

24 THE WITNESS: Which is Number 11.

25 BY MR. LINSIN:

1 Q And is there something on the overlay which indicates
2 the placement of that shot?

3 A Yes. There's an orange sticker, Number 1.

4 Q And is this overlay D-10b, Mr. Koenig?

5 A Yes, sir.

6 Q All right. Now with reference to the second shot which
7 you determined as having been fired on that day---

8 THE COURT: Now, Mr. Linsin, we have about ten more
9 minutes, if you want to pick an appropriate time---

10 MR. LINSIN: Yes, Your Honor. My thinking was this
11 shot and then we could break.

12 THE COURT: All right.

13 BY MR. LINSIN:

14 Q With reference to the second shot that was fired on that
15 day, sir, what information did you have to assist you in
16 developing an opinion as to the location of that second shot?

17 A There was no visual information as help at all.

18 Q What other information did you utilize, sir?

19 A We used the audio track and the videotapes from
20 Channel 11 and 2, and again used this echo analysis, and you
21 can kind of see that it will again pick up echoes off this
22 building, various vehicles down here, buildings over here,
23 and you can use this all in placement of the camera and you
24 may find the two slots where the microphone and the gunshot
25 occurred. It has to match.

1 MR. LINSIN: Okay. I would just ask Mr. Brereton
2 to advance the videotape to the point in time that Mr. Koenig
3 determined Gunshot Number 2 was fired.

4 May the record reflect we have stopped at eleven
5 fifty-one and zero-thirtieths of a second, which is five
6 thirtieths of a second beyond where Mr. Koenig had indicated
7 this shot occurred.

8 BY MR. LINSIN:

9 Q Now did you utilize this visual information, Mr. Koenig,
10 that you see on the screen now to assist you in placing where
11 the camera was when Shot Number 2 was fired?

12 A Yes, sir.

13 Q' All right. And referring to the overlay, D-10b, would
14 you indicate to the Court and the members of the jury where
15 you concluded the second shot was fired from on that day?

16 MR. HARWELL: Objection, again to the form,
17 referring to it as the second shot fired, Your Honor. It had
18 to be the second shot recorded.

19 THE COURT: Well, the second shot recorded.

20 MR. HARWELL: Yes.

21 THE COURT: All right.

22 MR. LINSIN: Your Honor, I believe the witness has
23 testified it was his conclusion there were 39 shots fired on
24 that day.

25 MR. HARWELL: My notes are very clear, Your Honor.

1 THE COURT: Wait a minute. Is he prepared to say
2 this is the second shot fired out of 39?

3 BY MR. LINSIN:

4 Q Are you prepared to state that this was the second shot
5 fired during the period of time that the cameras were running
6 and the videotapes that you had examined?

7 A Yes, sir.

8 THE COURT: All right. Go ahead.

9 BY MR. LINSIN:

10 Q Would you then show the Court in reference to D-10b -
11 show the Court and the jury where you concluded the second
12 shot fired was located?

13 MR. BOST: Objection to the use of the term
14 "concluded," Your Honor.

15 THE COURT: Overruled. Go ahead. Everybody
16 understands that this witness is giving his expert opinion.

17 Go ahead.

18 A Gunshot Number 2 was - in fact it's marked with this
19 orange sticker with the number "2" on it. It's located
20 between Vehicles 38 and 37, south of Vehicle 43.

21 BY MR. LINSIN:

22 Q Now as to either Shot 1, or Shot 2, were you able to
23 determine whether or not the shots were supersonic or
24 subsonic?

25 A Shot Number 1 is probably subsonic. And Shot Number 2

1 was probably supersonic. I saw an indication of one of those
2 supersonic end-waves I talked about previously.

3 Q All right. And were you able to identify the person
4 who fired Shot Number 2?

5 A No, sir.

6 MR. LINSIN: Your Honor, I believe this would be an
7 appropriate time to conclude.

8 THE COURT: All right. Very well.

9 Ladies and gentlemen, we'll adjourn now for the
10 weekend and resume this trial Monday morning. Please report
11 to the jury room at a quarter to 9:00 Monday morning, and
12 remember my admonition not to discuss the case among your-
13 selves nor with anyone else; not to read the newspapers about
14 the case or listen to anything on the radio about the case or
15 watch or listen to anything on TV about the case.

16 So with that, we'll adjourn. I hope you have a
17 very pleasant weekend. I will look forward to seeing you at
18 a quarter to 9:00 Monday morning. Thank you.

19 (Jury out at 3:00 P.M.)

20 (Whereupon, the proceedings were adjourned for the
21 day at 3:00 P.M., to resume Monday morning, January 30,
22 1984, at 9:00 o'clock A.M.)

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I N D E X

WITNESS

DIRECT

CROSS

REDIRECT

RECROSS

Bruce E. Koenig

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Afternoon Session: Page 43

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1 UNITED STATES DISTRICT COURT
2 MIDDLE DISTRICT OF NORTH CAROLINA
3 GREENSBORO DIVISION
4

5
6 UNITED STATES OF AMERICA)

7 V.)

) Criminal Action
) No. CR-83-53-G

8 VIRGIL L. GRIFFIN,)
9 EDWARD WOODROW DAWSON,)
10 DAVID WAYNE MATTHEWS,)
11 ROLAND WAYNE WOOD,)
12 JERRY PAUL SMITH,)
13 JACK WILSON FOWLER, JR.,)
14 ROY C. TONEY,)
15 COLEMAN B. PRIDMORE, and)
16 RAEFORD MILANO CAUDLE)

) Winston-Salem, North Carolina
) January 30, 1984
) 9:45 o'clock A.M.

17 VOLUME II

18 EXAMINATION OF BRUCE E. KOENIG

19 BEFORE THE HONORABLE THOMAS A. FLANNERY
20

21 TRANSCRIPT ORDERED BY: R. JOSEPH SHER, ATTORNEY
22 UNITED STATES DEPARTMENT OF JUSTICE
23
24
25

1 APPEARANCES:

2 DANIEL L. BELL, II,
3 NORAJEAN FLANAGAN, and
4 GREGORY F. LINSIN, Attorneys,
United States Department of Justice,
appearing on behalf of the United States of America.

5 FRED R. HARWELL, JR., ESQ.,
6 appearing on behalf of the
Defendant Virgil L. Griffin.

7 THOMAS J. KEITH, ESQ.,
8 appearing on behalf of the
Defendant Edward Woodrow Dawson.

9 JIM D. COOLEY, ESQ.,
10 appearing on behalf of the
Defendant David Wayne Matthews.

11 ROY G. HALL, JR., ESQ.,
12 appearing on behalf of the
Defendant Roland Wayne Wood.

13 NEILL A. JENNINGS, JR., ESQ.,
14 appearing on behalf of the
Defendant Jerry Paul Smith.

15 JEFFREY P. FARRAN, ESQ.,
16 appearing on behalf of the Defendant
Jack Wilson Fowler, Jr.,

17 S. FRALEY BOST, ESQ.,
18 appearing on behalf of the
Defendant Roy C. Toney.

19 HAROLD F. GREESON, ESQ.,
20 appearing on behalf of the
Defendant Coleman B. Pridmore.

21 LEON E. PORTER, JR., ESQ.,
22 appearing on behalf of the
Defendant Raeford Milano Caudle.

23 - - - - -

1 (Call to Order of the Court)

2 THE COURT: Well, are we ready to proceed?

3 All right; bring the jury in.

4 (Jury in at 9:45 A.M.)

5 THE COURT: Good morning, ladies and gentlemen.

6 THE JURORS: Good morning.

7 THE COURT: Let's proceed.

8 MR. LINSIN: Mr. Bruce Koenig will be called to the
9 stand at this time.

10 THE CLERK: Please return to the witness stand.
11 You've previously been sworn.

12 BRUCE E. KOENIG, GOVERNMENT'S WITNESS, PREVIOUSLY
13 SWORN

14 DIRECT EXAMINATION (CONTINUING)

15 BY MR. LINSIN:

16 Q Mr. Koenig, you testified last week concerning certain
17 information you had received about the equipment that was
18 used by the Channel 11 and the Channel 2 camera crews on
19 November 3rd at Everitt and Carver. Now, sir, given what you
20 understand as to the quality of that equipment and the type
21 of equipment that was used, do you have an opinion as to the
22 maximum distance from one of those microphones at which a
23 gunshot fired on the street would have been recorded?

24 ALL DEFENSE COUNSEL: Objection.

25 THE COURT: Well, he's an expert. He can give his

1 opinion.

2 And as I explained to you earlier, ladies and
3 gentlemen of the jury, an expert can give his opinion and
4 it's up to you to decide whether to believe it or not,
5 whether there's sound basis for the opinion; and that's the
6 test you apply to the testimony of any expert. So bear that
7 in mind. All right?

8 Okay. Go ahead. Go ahead.

9 A A gunshot is a very loud sound.

10 MR. GREESON: Well, objection, unless he has an
11 opinion. He hasn't said he has an opinion.

12 THE COURT: Do you have an opinion, sir?

13 THE WITNESS: Yes, sir.

14 THE COURT: What is your opinion? And then you can
15 state the reason for it.

16 A Well, it would vary, but I would say at least a half
17 mile away; and that's based on that a gunshot is a very loud
18 sound. It's something you can hear over a great distance,
19 and a microphone is a very sensitive instrument. At times
20 you'll pick up stuff even the ear misses, but it's probably in
21 the range of sensitivity of about what you can hear. And a
22 gunshot fired in the open would tend to travel at least a
23 half a mile. Sometimes you could hear it much farther away
24 than that.

25 BY MR. LINSIN:

1 Q You also testified last week, Mr. Koenig, that in your
2 opinion the first gunshot fired that day, Shot Number 1, was
3 probably subsonic.

4 MR. HALL: Objection.

5 MR. FARRAN: Objection.

6 THE COURT: That's all right.

7 BY MR. LINSIN:

8 Q Why, Mr. Koenig, did you use the word "probably" when
9 you made that determination?

10 A This end wave I talked about last week, that reflects
11 whether a gunshot - if it's supersonic or not. Okay? If a
12 gunshot lacks that end wave, and under controlled conditions,
13 where you could look at everything, you can say it is
14 subsonic or it is supersonic. One of the problems you run
15 into is that the end wave travels kind of straightforward
16 from the gun, so if the gun is pointed - if I fired in the
17 opposite direction from you, you wouldn't see the end wave,
18 even though it exists. If I fired towards you, you would see
19 it. So we get into a problem that if I don't see an end
20 wave, oftentimes I can't be positive it doesn't exist.

21 The other problem is, what if the bullet is just barely
22 supersonic? Last week I talked about that on that day the
23 speed of sound was 1,113 feet. What if the bullet traveled
24 at 1,114 feet? Well, it's actually supersonic. It's going
25 faster than the speed of sound, but the end wave would vir-

1 tually not be visible. So many of these I have to sit there
2 and say, "It's probably subsonic. I found no evidence of it
3 being supersonic."

4 Q What causes the end wave, Mr. Koenig?

5 A The bullet itself produces a sonic boom, if you want to
6 call it, like a jet going overhead. And this boom goes
7 ahead--- For instance, if I fired a bullet at Mr. Linsin,
8 the attorney here, and I fired it from here, the bullet would
9 get to him, if it was supersonic, faster than the sound of
10 the blast because the gunshot goes off and that wave is pro-
11 duced by the gunshot being fired. It travels 1,113 feet per
12 second.

13 Well, let's say the bullet is going at 3,000 feet per
14 second. The bullet would get to him before the shot would be
15 heard. And that difference - that bullet going through, pro-
16 duces this wave, this characteristic end wave, as it travels.
17 So that wave gets to him as the bullet does. So he would see
18 the end wave first and then sometime thereafter the gunshot
19 blast itself would arrive at his position.

20 Q At the conclusion of your testimony last week, Mr.
21 Koenig, you had testified to the location of the first and
22 second shots fired on November 3rd, and you had referred to
23 Government's Exhibit D-10, the large scene diagram that is
24 now in front of the jury, and the overlay, Government's
25 Exhibit D-10b, as reflecting the location of those two shots.

1 Who placed those stickers with the small number one and
2 number two on that overlay, Mr. Koenig?

3 A I did.

4 MR. FARRAN: Objection again to the form of the
5 question, using the term "shots fired" rather than "shots
6 recorded," is testimony by the attorney for the
7 government. All Mr. Koenig can testify to is shots that were
8 recorded on the audio portion of the videotape that day. He
9 cannot testify as to how many shots were fired.

10 THE COURT: Well, I think the jury understands the
11 question. Go ahead.

12 MR. LINSIN: Thank you, Your Honor.

13 A I put the stickers on the overlay.

14 BY MR. LINSIN:

15 Q And did you use any particular reference point on this
16 scene diagram in calculating the locations on the overlay?

17 A Yes, sir.

18 Q Would you tell us what that was, please?

19 A When I computed all these shots, I had to have a
20 reference point that anybody after me could come back and
21 say, "Here's where the points were." So I just used the
22 southwest corner of the 1700 Carver Building.

23 THE COURT: Where is that?

24 MR. LINSIN: May the witness step down here?

25 THE COURT: Yes. Why don't you point that out.

1 BY MR. LINSIN:

2 Q And, Mr. Koenig, would you point, indicating on
3 Government's Exhibit D-10, point to the corner to which you
4 just testified?

5 A It's this corner right here (indicating). And it was
6 just a reference point. In other words, I could have taken
7 this corner here and this corner over here. I just used that
8 as my reference point. It could have been any place on the
9 map.

10 Q And how did you then calculate the locations of these
11 shots, sir?

12 A Okay. Like for instance, on Shot Number 1, I would say -
13 this is north - I would say it would be X amount of feet
14 west and then X amount of feet south, so I could find the
15 exact point.

16 Q Now did that reference point, other than using it as a
17 method for calculating the location, did that particular cor-
18 ner of the building have any other significance in the pro-
19 cess of your analysis?

20 A No, sir.

21 Q And what effect would it have had, Mr. Koenig, if the
22 placement of the corner of that building was off by some
23 minor margin in measurement?

24 A It could easily be adjusted for each gunshot. For
25 instance, if it was off six inches, you just move our

1 measurements by six inches appropriately, and it would
2 correct for that.

3 Q Was this one of the factors you took into account in
4 calculating your error rate or potential rate of error in the
5 placement of these shots?

6 A Yes, sir.

7 MR. LINSIN: Your Honor, I would request that the
8 jury be permitted to view a portion of the Channel 11 video
9 at this time.

10 THE COURT: Very well.

11 MR. LINSIN: That would be Exhibit VT1(b).

12 (Whereupon, a portion of Government's Exhibit
13 VT1(b) was viewed.)

14 BY MR. LINSIN:

15 Q Now, Agent Koenig, you also testified in connection with
16 Shot Number 1 last week that you had seen a puff of smoke on
17 the videotape, on Channel 11, rising from the location where
18 you concluded the first shot was fired, and that shortly
19 after that, on the same videotape, you observed a person in a
20 truck holding a gun in the location where you had found the
21 first shot to have been fired. I'm going to ask you now to
22 view the Channel 11 videotape slightly advanced from the
23 placement on the tape where we have frozen at this point,
24 which for the record is eleven minutes, twenty-eight seconds
25 and twenty-one thirtieths of a second, and ask you to point

1 out to the Court and the jury the man to whom you were
2 referring last week.

3 A This individual, approximate middle of the - middle
4 upper part of the screen, sticking out of the window here of
5 this truck.

6 Q For the record, we have frozen the frame again at eleven
7 minutes, thirty-nine seconds and twenty-three thirtieths of a
8 second.

9 THE COURT: Where is that person again? Point him
10 out, sir.

11 THE WITNESS: Right here, Your Honor.

12 I think if you continue on a little bit more here,
13 you now see the gun in his hand, sticking up above the truck.

14 BY MR. LINSIN:

15 Q And again, for the record, we have moved to eleven
16 minutes, forty seconds and four-thirtieths of a second.

17 Now, Mr. Koenig, you have indicated the individual on
18 the videotape that you had referred to last week, and I ask
19 you now, sir, whether that person, as depicted in this frame
20 on the videotape, is in the location from which you concluded
21 the first shot was fired on that day?

22 MR. HALL: Object to the leading, Your Honor.

23 THE COURT: I think it's a proper question. Go
24 ahead. Overruled.

25 A Yes, sir. He's within the area of the first gunshot.

1 BY MR. LINSIN:

2 Q And, Agent Koenig, did you - in your opinion, Agent
3 Koenig, were any other gunshots fired from that location on
4 November 3rd?

5 A That was the only---

6 MR. FARRAN: Objection.

7 THE COURT: Overruled.

8 A That was the only gunshot fired from that particular
9 location, yes, sir.

10 Q All right, sir.

11 MR. LINSIN: Now, Your Honor, I would now request
12 that this videotape be advanced for a few frames, and then if
13 we could switch to the Channel 8 video to illustrate one
14 additional point.

15 THE COURT: All right.

16 MR. LINSIN: That was frozen at eleven minutes,
17 forty-nine seconds, and one-thirtieth of a second.

18 BY MR. LINSIN:

19 Q And now I would ask the witness to consider a portion of
20 VT3(b), the Channel 8 videotape that has been admitted into
21 evidence.

22 (Whereupon, a portion of Government's Exhibit
23 VT3(b) was viewed.)

24 MR. COOLEY: I don't believe we've had the entire
25 Channel 8 tape played for the jury yet, and I wonder if it

1 would be appropriate to show the jury the entire Channel 8
2 tape before we start going to specific segments of it.

3 THE COURT: Well---

4 MR. LINSIN: Your Honor, we certainly intend to
5 show the entire Channel 8 tape. I have requested this wit-
6 ness's attention to a specific portion of this tape for a
7 very specific purpose.

8 THE COURT: When do you propose to play the entire
9 Channel 8?

10 MR. LINSIN: Yes, indeed, Your Honor.

11 THE COURT: Well, when are you going to do that?

12 MR. LINSIN: We - we had intended doing that, Your
13 Honor, prior to the conclusion of this witness's testimony.

14 THE COURT: All right. You may proceed.

15 MR. LINSIN: Thank you.

16 THE COURT: At least with this segment of it, and
17 we'll see what happens.

18 MR. LINSIN: Now go ahead.

19 Now we do not have a time counter on this channel
20 videotape. I would just indicate for the record that in the
21 frame at this point is a sedan in the foreground and a pickup
22 truck in the background. The individual who is in the loca-
23 tion of Shot Number 1 is still visible out of the sight of
24 the pickup, and there is another individual in the foreground
25 to the left of the sedan.

1 BY MR. LINSIN:

2 Q Now my question to you as to this particular portion of
3 the Channel 8 video, Mr. Koenig, is as follows: Are the two
4 individuals to whom I have just referred looking in the
5 direction from which you concluded the second shot was fired
6 on that day?

7 MR. FARRAN: Object to the leading.

8 MR. GREESON: If Your Honor please, this leading is
9 absolutely improper. Mr. Koenig can testify to these facts,
10 and that's what the tape is being run for, and I have no
11 objection to that.

12 THE COURT: All right. Don't lead the witness.
13 Rephrase the question.

14 BY MR. LINSIN:

15 Q Mr. Koenig, if you could step down to Government's
16 Exhibit D-10 with the overlay of D-10b. Would you again
17 point out to the jury the location from - the location where
18 you concluded the second shot was fired on that day?

19 MR. JENNINGS: Object to repetition.

20 THE COURT: No. That's a permissible question. Go
21 ahead.

22 A Gunshot Number 2 occurred south of Vehicle 43 on the
23 south side of the street.

24 BY MR. LINSIN:

25 Q And viewing the frozen frame on the Channel 8 video, do

1 you have an opinion as to the direction in which the two
2 individuals are looking, sir?

3 MR. PORTER: Objection, Your Honor. The jury can
4 view the videotape themselves.

5 THE COURT: Well, no. I'll permit the question.
6 Go ahead.

7 A We're looking at, on this part of the video, which is
8 Channel 8 film - you see where the Number - first shot was
9 fired here, one man in the pickup truck and the other indivi-
10 dual out here. And you hear Shot Number 2 occur and they both
11 look back over in this general direction of Shot Number 2;
12 they respond. When Shot Number 2 goes off, they turn around
13 and look at it.

14 BY MR. LINSIN:

15 Q Now, Agent Koenig, we have changed the overlays on
16 Government's Exhibit D-10. I'm now asking you to refer to
17 Government's Exhibit D-10 and the overlay D-10c. Mr. Koenig,
18 were you able to determine the location from which Shot
19 Number 3 was fired?

20 A No, sir.

21 Q Were you able to determine the location from which Shot
22 Number 4 was fired?

23 A No, sir.

24 Q And were you able to determine the location from which
25 Shot Number 5 was fired?

1 A No, sir.

2 Q Were you able to determine who fired Shot 3, Shot 4 or
3 Shot 5?

4 A No, sir.

5 Q Why were you not able to make these determinations,
6 Mr. Koenig?

7 A As I discussed earlier, I'm basing this on this echo
8 analysis, that echoes bounce off buildings and cars and
9 everything else. Gunshots Number 3, 4 and 5 had so few
10 echoes, with such low amplitude, that I didn't feel like I
11 could make an accurate determination where they were---

12 Q Now, Mr. Koenig, I'm going to ask you to consider the
13 entire area as depicted in Government's Exhibit D-10, and do
14 you have an opinion, sir, as to where Shots 3, 4 and 5 could
15 have been fired without producing the echo patterns which you
16 just discussed?

17 A Yes, sir.

18 Q Would you take the pointer and describe with some par-
19 ticularity the locations from which those shots could have
20 been fired without producing the echo patterns, sir?

21 A Yes, sir. What I'm really doing here is eliminating the
22 areas where I know I would get echoes, that I could deter-
23 mine. There's two major areas, one is this area right in
24 here (indicating). This is right north of the intersection
25 of Everitt and Carver, between the Recreation/Administration

1 Building and the 1700 Carver Building, this area right in
2 here.

3 Q What would be the northern boundary of the area you're
4 indicating now, Mr. Koenig? If you could make reference to a
5 portion of one of the vehicles there, it might be of
6 assistance.

7 A Well, it's not a regular line; it kind of V-shapes up,
8 up in the area of the northern part of car - Vehicle Number
9 16. It's kind of a V-shaped area.

10 Q And so you're indicating the point of that "V" would be
11 actually north of Vehicle 16, in the center - toward the
12 center of Carver Drive; is that correct?

13 A Yes, sir.

14 Q And what would be the southern boundary of that area?

15 A Probably in the street itself out here. Is this Everitt
16 Street?

17 Q You're indicating the center portion of Everitt Street?

18 A Yes.

19 Q The street that's running east and west?

20 A Yes, sir.

21 Q And would the east and west boundaries of this area be
22 determined by the edges of the two buildings which---

23 MR. GREESON: Well, object to leading, Your Honor.
24 Let him show it.

25 THE COURT: Well, let him show it, Mr. Linsin.

1 MR. LINSIN: All right.

2 A Okay. It's near the edge. It kind of varies about how
3 far you get away from the edge. So it's not a box, but it's
4 fairly close to that. It kind of stretches out a little bit,
5 it comes out to the edge of the building, or approximately
6 the edge of the building.

7 Q And are there any other areas, sir, from which the shots
8 could have been fired, Shots 3, 4 and 5, without producing
9 the echo pattern?

10 A The other major area is down beyond Vehicle Number 42.

11 Q When you say beyond, would you make reference?

12 A West; west of Vehicle 42. Because you reach a point
13 where you're not getting these main echoes off this building
14 and this building, and this area has - there's not many
15 vehicles that would cause sufficient echoes to be useful, or
16 any of this area down west of 42, until you start getting
17 down - well, you'd have to go beyond Vehicle 48 before you'd
18 start picking up echoes again, west, beyond 48, before you
19 could pick up.

20 Q How far west, sir, if you can tell us?

21 A It would be well west, probably past the Vehicle 55.

22 Q All right, sir. And would you indicate what the shape
23 of this particular area would be?

24 A This would roughly be a rectangle, coming up in this
25 area, along both sides of the street, parallel to the

1 street--- Again, it'll have some irregularities.

2 Q The longer dimension of the rectangle being east/west or
3 north/south?

4 A East/west.

5 Q Now at this point, Mr. Koenig, I am going to cover up a
6 portion of Government's Exhibit D-10 and the overlay. And
7 for the purposes of the record, I am covering the portion
8 which is to the west of Vehicle 43, the covered portion being
9 on a north/south axis, and everything to the west of Vehicle
10 43 has been covered.

11 Now, Mr. Koenig, for the next couple of questions I'm
12 going to ask you to consider only that area of D-10 which is
13 now exposed; that is, everything to the east of Vehicle 43.
14 If I were to ask you, Mr. Koenig, considering only that
15 exposed portion of Government's Exhibit D-10, what areas
16 Shots 3, 4 and 5 could have been fired from without producing
17 the echo patterns that you discussed, what would be your
18 answer, sir?

19 A Most probably the area would be this area I outlined
20 previously, this area north of the intersection of Carver and
21 Everitt. I've outlined by the borders of the 1700 Carver
22 Building and the Recreation/Administration Building.

23 Q And what would be the north/south boundaries of that
24 area, Mr. Koenig?

25 A South would be the middle of the street here, Everitt

1 Street (indicating), and north would be - again, it's not a
2 squared-off area, but would kind of peak just north of
3 Vehicle 16, in the middle of the street, Carver Street.

4 Q Did you testify in the previous proceeding, Mr. Koenig,
5 that you were 99 percent certain that Shots 3, 4 and 5 were
6 fired in the area that you just described?

7 MR. HALL: Object to the leading, if Your Honor
8 please.

9 THE COURT: I'll permit the question. Go ahead.

10 A Yes, sir.

11 BY MR. LINSIN:

12 Q And when you testified to that, Mr. Koenig, what area of
13 the intersection of Everitt and Carver were you asked to
14 consider?

15 A Approximately the area that that line appears.

16 Q Would you be more specific?

17 A It's from--- The eastern boundary would be Vehicle 24,
18 the western boundary would be Vehicle 43, south to the
19 vehicle such as 46 and north to the northern edge of 1700 Carver.

20 Q And when you testified to that opinion, Mr. Koenig, had
21 you been provided any information about anyone having fired
22 additional shots further west of Vehicle 43?

23 MR. COOLEY: Objection, Your Honor. That's not
24 part of his expertise. He said he didn't consider what
25 people told him about where shots were fired from. It's just

1 a scientific analysis.

2 THE COURT: What do you say? Do you want to
3 respond to that?

4 MR. LINSIN: Your Honor, I'm just trying to deter-
5 mine what information he based his earlier testimony on.
6 He's testified that he was considering only this area, and
7 I'm just attempting to determine whether or not he had been
8 provided any additional information when he rendered the
9 earlier testimony.

10 THE COURT: I'll permit the question. Go ahead.

11 A No, I had no basis for any shots other than in this par-
12 ticular area at the time, at least I was told that---

13 MR. COOLEY: Objection to what he was told.

14 A ---done by an evaluation---

15 THE COURT: I'll sustain the objection.

16 BY MR. LINSIN:

17 Q All right. Now I would like to remove the cover to the
18 western portion of Government's Exhibit D-10 and ask you,
19 Mr. Koenig, considering the entire area of Government's D-10,
20 whether you still believe it to be 99 percent certain that
21 Shots 3, 4 and 5 were fired in the rectangular area that you
22 described at the northern portion of the intersection of
23 Everitt and Carver.

24 MR. HALL: Objection, Your Honor. I think he's
25 cross examining his witness.

1 THE COURT: I'll permit the question. Go ahead.

2 A No, sir. When I was limited to this area here, I felt
3 that this was - the overwhelming possibility was in this area
4 right around the intersection of Everitt and Carver. But
5 again, this area down here could also produce gunshots that
6 have no echoes, and I have no way of knowing which of those
7 areas the gunshot could have come from.

8 BY MR. LINSIN:

9 Q To make sure the record is clear, when you say, "this
10 area down here," would you describe the area you're talking
11 about for the record, in reference to D-10?

12 A Again, it's down west of at least Vehicle 42 - 41, 42,
13 and extending in the east/west direction probably to near
14 Vehicle 55. In the north/south direction probably 15 or 20
15 feet, at least, to each side of the road, Everitt Street.

16 Q All right, sir. Now, Mr. Koenig, were you able to
17 determine the times at which Shots 3, 4 and 5 occurred?

18 A Yes, sir.

19 Q All right. And with reference to Government's Exhibit
20 D-5, would you tell us what times those are, sir?

21 A On Channel 11, they would be at 11:54:28, 11:55:20, and
22 12:00:03.

23 THE REPORTER: 12:01:03, did you say?

24 MR. LINSIN: Would you repeat that last time code?

25 THE WITNESS: 12:00:03.

1 MR. LINSIN: Your Honor, I request the jury be per-
2 mitted to view those - that portion of the Channel 11 tape at
3 this time.

4 THE COURT: All right.

5 (Whereupon, a portion of the Channel 11 videotape
6 was viewed.)

7 BY MR. LINSIN:

8 Q Were those the time portions to which you have just
9 testified, Mr. Koenig?

10 A Yes, sir.

11 Q Mr. Koenig, were you able to determine the location from
12 which Shot Number 6 was fired?

13 A Yes, sir.

14 Q With reference, sir, to the overlay we have now placed
15 on Government's Exhibit D-10, that overlay being D-10d, would
16 you indicate the place from which you concluded that Shot
17 Number 6 was fired?

18 A Yes, sir. Shot Number 6 was fired near the southeast
19 corner of Vehicle 22.

20 Q And just so we're clear, did you again place these
21 stickers on this overlay, Mr. Koenig?

22 A Yes, sir, I did.

23 Q Did you place stickers on all of the overlays, in terms
24 of placement of the 39 gunshots?

25 A Yes, sir, I did.

1 MR. COOLEY: We again can't see back here.

2 BY MR. LINSIN:

3 Q Were you able to determine a location for Shot Number 7?

4 A Yes, sir.

5 Q Where was that?

6 A Basically the same position as Shot Number 6.

7 Q And Shot Number 8, were you able to determine the loca-
8 tion for that shot?

9 A Again, approximately the same position, near the
10 southeast corner of Vehicle 22.

11 Q And did you determine the shot location for Shot Number
12 9?

13 A Again, the same position.

14 Q And did you determine the location for Shot Number 10?

15 A Yes, sir, the same position as Shots 6 through 9.

16 Q And did you determine the location for Shot Number 11?

17 A Shot Number 11 was slightly farther east from the posi-
18 tions of Shots 6 through 10, just north of Vehicle Number 10.

19 Q Moving back to Shot Number 6, Mr. Koenig, were you able
20 to form an opinion as to the individual you saw on the video
21 who fired Shot Number 6?

22 A Yes, sir.

23 Q Mr. Koenig, I'm going to ask you to refer to
24 Government's Exhibit D-8 and ask if you see in any of these
25 video stills contained on this exhibit the individual that

1 you concluded fired Shot Number 6?

2 ALL DEFENSE COUNSEL: Objection.

3 MR. KEITH: Objection, Your Honor.

4 MR. HALL: His expertise is magnetic tape analysis,
5 not photogrammetry or photo interpretation. It's outside the
6 scope of his expertise.

7 THE COURT: I'll permit it. It's up to the jury to
8 decide whether his identification is a correct one.

9 You are the judges of the fact, members of the
10 jury.

11 A Well, my description of individuals are not by name,
12 because I don't know the individuals. But I show that it was
13 fired by a bearded white male in a white sweater or shirt
14 with dark trousers. And the person matching that description
15 would be what is marked here as---

16 BY MR. LINSIN:

17 Q Would you simply read the name that appears beneath the
18 photograph to which you are pointing?

19 A Roland Wayne Wood.

20 Q Were you able to determine, Mr. Koenig, who had fired
21 Shot Number 7?

22 A No, sir.

23 Q Were you able to determine who had fired Shot Number 8?

24 A No, sir.

25 Q Were you able to determine who had fired Shot Number 9?

1 A Yes, sir. It was again the picture---

2 MR. HALL: Object again, if Your Honor please.

3 THE COURT: All right. I'll permit the answer. Go
4 ahead.

5 A ---depicted as Roland Wayne Wood.

6 BY MR. LINSIN:

7 Q And as to Shot Number 10, were you able to identify -
8 were you able to determine who had fired Shot Number 10?

9 A Yes, sir. Again, Roland Wayne Wood.

10 Q As to Shot Number 11, Mr. Koenig, were you able to
11 determine who had fired that shot?

12 A Yes, sir.

13 MR. HALL: Objection again, Your Honor.

14 THE COURT: I'll permit it. Go ahead.

15 BY MR. LINSIN:

16 Q Who did you determine fired that shot?

17 A Is this picture of a person---

18 MR. KEITH: Objection.

19 MR. COOLEY: Objection to the witness asking
20 questions.

21 THE COURT: Sustained. Sustained. Just answer the
22 question.

23 BY MR. LINSIN:

24 Q Please just look carefully at the photographs.

25 A The individual here, with the baseball cap, seen through

1 the glass in this photo here marked "David Matthews" would be
2 the individual.

3 MR. COOLEY: Objection and move to strike.

4 THE COURT: Overruled.

5 BY MR. LINSIN:

6 Q And again, which shot was that you were referring to?

7 A Gunshot Number 11.

8 MR. LINSIN: Now, Your Honor, as to these shots, I
9 would request that the jury be permitted to view the relevant
10 time frames of both Channel 11 and then Channel 2.

11 THE COURT: Very well.

12 MR. LINSIN: And, Your Honor, as with the last shot
13 I would request that we be permitted to run it through at
14 regular speed and then with the capability of this machine,
15 to return and run it through at slow speed.

16 THE COURT: All right. You may do that.

17 (Whereupon, a portion of Channel 11 videotape was
18 viewed.)

19 BY MR. LINSIN:

20 Q Are those the portions of the Channel 11 video during
21 which you concluded Shots 6 through 11 were fired, Mr.
22 Koenig?

23 A Yes, sir.

24 Q And those would include, again making reference to
25 Government's D-5 for the purpose of the record, would you

1 tell us what time code portions Shots 6 through 11 were
2 fired?

3 A Number 6 was 12:11:14, Number 7 was 12:12:02, Number 8
4 was 12:12:14, Number 9 is 12:12:16, Number 10 is 12:13:15,
5 and Number 11 is 12:18:00.

6 Q All right.

7 MR. GREESON: Mr. Brereton, I understand, has a
8 cross reference between the time counter on his machine here
9 and the time code on the video. I don't think it's necessary
10 to run up to a particular place on the tape to go through
11 this ear-shattering stuff every time we have to do it.
12 Either we should be able to, you know, turn the volume down or
13 he can just use his chart and go up to the proper place on
14 the time counter.

15 THE COURT: All right. See if you can do that.

16 MR. LINSIN: Your Honor, I would concur in
17 Mr. Greeson's request.

18 THE COURT: All right. Let's see if we can't work
19 it out.

20 MR. LINSIN: Yes, sir.

21 (Whereupon, a portion of the Channel 2 videotape
22 was viewed.)

23 MR. LINSIN: For the record here, we have frozen at
24 22:18:09 on Channel 2, and I would ask Mr. Brereton to
25 proceed with the film in slow motion from here until

1 22:24:26.

2 BY MR. LINSIN:

3 Q Now that portion which I just described, Mr. Koenig, for
4 the purposes of the record, is that the time period on the
5 Channel 2 videotape where you concluded Shots 6 through 11
6 occurred?

7 A Yes, sir.

8 Q Now, Mr. Koenig, with reference to Shots 12 through 19,
9 I will not ask each one individually, but were you able to
10 determine the location from which Shots 12 through 19 were
11 fired?

12 A Yes, sir, I did.

13 Q Now, Mr. Koenig, if you would step down and make
14 reference to the next overlay we have placed on Government's
15 Exhibit D-10, which will be D-10e, using the pointer, would
16 you explain to the Court and to the jury the locations from
17 which you concluded Shots 12 through 19 were fired?

18 A Yes, sir. Gunshots Number 12, 14, 16, 17 and 18 came
19 from the area just east of the 1700 Carver Building, from the
20 sidewalk here. Gunshots 15 and 19 occurred right down at the
21 intersection here (indicating), on the northeast corner at
22 Everitt and Carver. Gunshot 13 occurred between Vehicles 21
23 and 22.

24 Q Now were you able to determine the identity of the per-
25 son who fired Gunshot Number 12?

1 A I determined the probable identity, yes, sir.

2 Q All right. Would you describe what you saw that indivi-
3 dual wearing?

4 A It was a white female wearing a yellow raincoat.

5 Q And as to Shot Number 13?

6 A Yes, sir. That was fired by a white male in a white
7 sweater or shirt, which was previously identified as---

8 Q Well, with reference to Government's Exhibit D-8, would
9 you indicate the video still that depicts that individual and
10 read the name that appears beneath that video still?

11 A Roland Wayne Wood.

12 Q And were you able to determine the identity of the per-
13 son who fired Shot Number 14?

14 A Again, it's probably the white female in a yellow rain-
15 coat.

16 Q And were you able to determine the identity of the per-
17 son who shot Vehicle Number - Shot Number 15?

18 A Yes, sir. It was fired by a white male in a blue jacket
19 and trousers.

20 Q And were you able to determine who fired Shots 16, 17
21 and 18?

22 A Yes, sir. It was definitely fired by the white female
23 in a yellow raincoat.

24 Q And were you able to determine the identity of the per-
25 son who fired Shot Number 19?

1 A Yes, sir. It was fired by a white male in a blue jacket
2 and trousers.

3 Q Now with regard, sir, to Shots 15 and 19, I ask you,
4 making reference to Government's Exhibit D-8, to point out
5 the individual still photograph that depicts the person you
6 believe fired Shots 15 and 19, and read the name that appears
7 beneath that video still.

8 A Yes, sir. Jerry Paul Smith.

9 Q Now with regard to Shots 15 and 19, Mr. Koenig, did you
10 obtain echo patterns in connection with those two shots that
11 permitted you to locate where those shots had been fired
12 from?

13 A No, sir.

14 Q How were you able to place Shots 15 and 19?

15 A You actually see the shots being fired on the video.
16 And one thing you have to worry about, when you look at
17 something visually, is how far back or how close they are.
18 It's very difficult to tell. In those pictures I can
19 actually see the person's feet on the sidewalk and actually
20 could see them firing. And additionally, it was in an area
21 where there were no echoes and our sound wave had no echoes,
22 just like we expected.

23 Q Were you able to obtain echoes from the Shot 13, which
24 you've indicated occurred between Vehicles 21 and 22?

25 A Yes, sir.

1 MR. LINSIN: At this time, Your Honor, I would
2 request the jury be permitted to view portions of the
3 Channel 11 video, and I would ask that it simply be run in
4 slow, instead of doing both, and request that Mr. Koenig
5 indicate on the frame the white female that he was - he has
6 concluded fired Shots 12, 14, 16, 17 and 18.

7 THE COURT: Very well.

8 MR. LINSIN: For the purposes of the record, we are
9 beginning on the Channel 11 video at 12:19:24, and we will
10 continue through 12:22:14.

11 BY MR. LINSIN:

12 Q And, Mr. Koenig, when you see the individual, the white
13 female that you had discussed earlier, would you just indi-
14 cate that to Mr. Brereton? And we will freeze the frame there
15 and you can point that individual out, if you will, to the
16 members of the jury.

17 (Whereupon, a portion of the Channel 11 videotape
18 was viewed.)

19 BY MR. LINSIN:

20 Q Okay. We have frozen at 12:21:06, and would you
21 describe, Mr. Koenig, again so the record is clear, where in
22 the frame the individual appears that you concluded fired
23 Shots 12, 14, 16, 17 and 18?

24 A Yes, sir. This is Vehicle 19 (indicating), right past
25 the tailgate, to the right of the tailgate, back in the sha-

1 dows, to the west of 1700 Carver, we see the individual back
2 here firing. You can see the yellow raincoat there.

3 MR. LINSIN: If we could advance the film forward
4 slowly.

5 BY MR. LINSIN:

6 Q Mr. Koenig, we have now frozen at 12:22:14. Can you
7 tell us which shot you concluded occurred at this time on the
8 Channel 11 videotape?

9 A Gunshot Number 19.

10 Q Okay. Now, Mr. Koenig, were you able to determine the
11 location from which Shots 20 through 24 - or locations, I
12 should say, from which Shots 20 through 24 were fired?

13 A Yes, sir.

14 Q Making reference to the overlay now covering Exhibit
15 D-10, which would be D-10f, would you point out to the Court
16 and to the members of the jury where you concluded Shots 20
17 through 24 were fired?

18 A Gunshot Number 20 was fired at the northeast corner of
19 Vehicle 9; 22 and 23 are somewhat off the southwest corner of
20 Vehicle 9. Gunshots 21 and 22 are just east of the far west
21 end of the Recreation/Administrative Building.

22 Q Now with reference to Shots 20 and 21, Mr. Koenig, were
23 you able to determine who had fired either of those shots?

24 A No, sir, I could not determine.

25 Q Were you able to determine who had fired Shot 22?

1 A Yes, sir. It was a tall white male with shoulder-length
2 hair in a blue-jean outfit.

3 Q Making reference, Mr. Koenig, to Government's Exhibit
4 D-8, I would ask you to examine these video stills and point
5 out the individual to whom you just referred.

6 A Well, there's several pictures of him here. This one, I
7 presume, the man to the left side of the Jack Fowler picture.

8 Q All right. You're indicating the picture that is above
9 the name "Jack Fowler"?

10 A Yes, sir.

11 Q And does the physical appearance of the man in that
12 video still agree with the physical appearance of the man you
13 concluded fired that shot?

14 A Yes, sir. Probably fired that shot.

15 Q Okay. And were you able to conclude who fired Shot
16 Number 23?

17 A Yes, sir. Again, it was the picture depicting Jack
18 Fowler.

19 Q Now with regard to Shots 22 and 23, Mr. Koenig, did your
20 analysis indicate anything distinctive as to those two par-
21 ticular shots?

22 A Yes, sir. Those two shots illustrated graphically the
23 end-wave supersonic boom that I referred to earlier. These
24 gunshots were fired at approximately thirty-two hundred feet
25 per second, almost three times the speed of sound. And the

1 end-waves preceding them were very definite, very obvious,
2 very unique. The highest velocity ballistics fired at the
3 scene were out of that weapon.

4 Q Now perhaps - I'm not certain we made this--- I posed
5 this question to you at the beginning, Mr. Koenig, but in
6 your analysis of whether a particular shot is subsonic or
7 supersonic or possibly subsonic, does that conclusion bear
8 any relation to the type of weapon that fired that particular
9 shot?

10 A To some extent.

11 Q Could you describe, please?

12 A When I'm looking for this end-wave, this supersonic
13 bullet, projectile, it's more important that you have a
14 bullet that's capable of doing that. In other words, you
15 could take a magnum weapon, made to shot supersonic, or a
16 rifle, and shoot subsonic ammunition in it. And you also
17 could take a weapon made for subsonic, and even though it
18 would be abusing the weapon, you could put supersonic ammuni-
19 tion in it and it would fire. So the ammunition is more
20 important than the weapon. Most weapons can fire some type
21 of supersonic projectiles, and the supersonic weapon can also
22 fire subsonic ammunition.

23 Q Okay. Mr. Koenig, moving on to Shot 24, were you able
24 to determine the identity of the person who fired Shot Number
25 24?

1 A No, sir. There's no visual---

2 THE REPORTER: There's no visual---

3 THE WITNESS: ---information.

4 A ---information.

5 BY MR. LINSIN:

6 Q Was there any visual information that assisted, any
7 visual information as to Shots 21 or Shot 20?

8 A Not sufficient to determine who fired it.

9 MR. LINSIN: Your Honor, I would now ask that these
10 portions of the Channel 11 video be viewed.

11 For the record, Your Honor, I'll request that the
12 jury view from 12:23:26 through 12:28:25.

13 THE COURT: Very well.

14 (Whereupon, a portion of the Channel 11 videotape
15 was viewed.)

16 BY MR. LINSIN:

17 Q Now, Mr. Koenig, I would ask you to make reference to
18 Overlay D-10g, which has now been placed over Government's
19 Exhibit D-10, and ask if you were able to determine the loca-
20 tions from which Shots 25 through 28 were fired?

21 A Yes, sir.

22 Q Would you explain to the Court and the members of the
23 jury where you concluded those shots were fired from?

24 A Gunshot 25 and 28 are near the southeast corner of
25 Vehicle 20, and Gunshots 26 and 27 are slightly off the

1 southwest corner of Venicle 9.

2 Q Now were you able to determine the person who fired Shot
3 Number 25?

4 A Probable determination.

5 Q Okay. Now would you explain, first of all, with
6 reference to Government's D-8, the individual that you
7 concluded probably fired Shot 25? And then I will remove
8 this and ask if you could explain how you made that conclu-
9 sion.

10 MR. KEITH: Objection.

11 THE COURT: I'll permit it. Go ahead. Overruled.

12 A The picture with the name "Roy Toney" you see here,
13 you can see the red flannel shirt and blue jeans.

14 BY MR. LINSIN:

15 Q Now how were you able to reach the probable conclusion
16 that that individual had fired Shot Number 25?

17 A Soon after the gunshot, he is seen at that location.
18 The time was so short, the probability of anyone else being
19 there that quickly is very small.

20 Q And with reference to Shots 26 and 27, did you make a
21 determination as to who had fired those two shots?

22 A Yes, sir.

23 Q And what was that determination?

24 A I determined a tall white male with shoulder-length hair
25 and a blue-jean outfit fired both those shots.

1 Q With reference to D-8, could you indicate the video
2 still that depicts that individual and read the name beneath
3 it?

4 A Jack Fowler.

5 Q All right. And he is the person - which of the persons
6 depicted in that video still?

7 A With the blue-jean outfit, and you can see the shoulder
8 weapon he has in his hand.

9 Q With regard, Mr. Koenig, to Shots 26 and 27, did those
10 two shots produce any distinctive wave patterns?

11 A Yes, sir.

12 Q What were they?

13 A Again, it was from the same probable individual that
14 fired - the two previous shots were highly supersonic,
15 traveling at about 3,200 feet per second, creating an end
16 wave characteristic from the supersonic ammunition being
17 used.

18 Q Now you say those characteristics appear in connection
19 with Shots 26 and 27?

20 A Yes, sir.

21 Q Now, Mr. Koenig, you've indicated that that charac-
22 teristic appeared - that end-wave - clear end-wave charac-
23 teristic appeared in connection with Shots 22, 23, 26 and 27?

24 A Yes, sir.

25 Q Did you obtain such a clear end-wave characteristic in

1 connection with any other of the 39 shots fired that day?

2 A No, sir.

3 Q With regard to Shot Number 28, Mr. Koenig, making
4 reference to Government's D-8, would you point out - were you
5 able to make a determination as to who had fired the gunshot?

6 A Yes, sir.

7 Q With reference to Government's D-8, would you indicate
8 the individual you concluded fired Shot Number 28?

9 MR. BOST: Objection.

10 THE COURT: Overruled. Go ahead.

11 A It was probably fired by Roy Toney.

12 MR. LINSIN: Your Honor, at this time I would like
13 the jury to view - request the jury view this portion of the
14 Channel 11 video.

15 THE COURT: Very well.

16 MR. LINSIN: For the record, I'm requesting the
17 jury view from 12:30:05 through 12:31:17 on the Channel 11
18 video.

19 MR. COOLEY: I'm sorry. What were those numbers
20 again, Mr. Linsin?

21 MR. LINSIN: From 12:30:05 to 12:31:17.

22 It's actually gone a second beyond here. That's
23 all right.

24 (Whereupon, a portion of the Channel 11 videotape
25 was viewed.)

1 MR. LINSIN: We'll have to back up for the next
2 batch. Okay.

3 THE COURT: We'll take a brief recess here.

4 MR. LINSIN: All right.

5 THE COURT: Don't discuss the case during the
6 recess period.

7 (Recess at 11:10 A.M., until 11:25 A.M.)

8 MR. HARWELL: Your Honor?

9 THE COURT: Yes, sir?

10 MR. HARWELL: Your Honor, so as not to belabor the
11 point any more than I already have, may I have a standing
12 objection to the use by the prosecutor of the term "number of
13 shots fired that day," just to make the record that I object
14 to the use of that term?

15 THE COURT: Yes.

16 MR. HARWELL: Then I'll be quiet.

17 THE COURT: All right, sir. The record will
18 reflect your objection and the objection is made on behalf of
19 all parties.

20 MR. HARWELL: Yes, sir. Thank you.

21 THE COURT: Very well.

22 Let's bring the jury in.

23 (Jury in at 11:30 A.M.)

24 MR. LINSIN: Your Honor, at this time we would ask
25 that the jury be permitted to view a portion of the Channel 8

1 videotape for the purposes of illustrating this witness's
2 testimony with regard to the identity of the individual who
3 fired Shots 25 and 28. I will ask that this portion be run
4 at slow speed, and ask Mr. Koenig to step down to the video
5 monitor and to indicate where he sees this individual in the
6 video, and describe the movements that he has referred to
7 earlier.

8 THE COURT: Very well.

9 (Whereupon, a portion of the Channel 8 videotape
10 was viewed.)

11 BY MR. LINSIN:

12 Q Freezing the Channel 8 video at this point, again we
13 have no time code, but for the record, there appears to be an
14 individual slumping in the background and two individuals
15 visible to the right of the screen.

16 Mr. Koenig, could you---

17 MR. GREESON: Your Honor, let me object once again
18 to Mr. Linsin testifying. It would have been very easy to ask
19 Mr. Koenig if this appeared to be the same place. I object
20 very strongly to his leading.

21 MR. LINSIN: Well, Mr. Greeson, if it's not the
22 same place, Mr. Koenig can tell us that. I'm simply
23 attempting to describe for the record what is visible on the
24 video screen.

25 THE COURT: All right. I think it's an appropriate

1 question. Go ahead.

2 BY MR. LINSIN:

3 Q Would you indicate the individual, if you can, Mr.
4 Koenig, that you concluded fired Shots 25 and 28?

5 MR. GREESON: Object to the word "concluded."

6 THE COURT: Overruled. Go ahead.

7 A The individual that probably fired 25 and 28 was this
8 individual in the reddish shirt and blue-jeans.

9 MR. BOST: Your Honor, I object to a probable iden-
10 tification. Either there's an identification or there is
11 not, and he's used the term "probably."

12 THE COURT: Well, you can cross examine him on
13 that. That goes to the weight, if any, the jury should give
14 his testimony.

15 A Mr. Linsin, if I may correct it, I meant "probably"
16 on 28, and it was fired on 25.

17 BY MR. LINSIN:

18 Q And why do you make that distinction, Mr. Koenig?

19 A Well, 25, I'm positive that's who fired it; 28, it's an
20 extremely high probability.

21 Q Why do you have those two different opinions as to those
22 two different shots, Mr. Koenig?

23 A I make it a "probably" when I think there's absolutely
24 any chance whatsoever that someone else could have been at
25 that location and fired it. If I'm positive that's the only

1 person that could have been there, either from directly
2 seeing him fire it or seeing the person standing there with
3 no one else around within a second or two, realizing somebody
4 couldn't move that quickly, then I'm going to say it's defi-
5 nite. If it takes three seconds or four seconds, I always
6 fear there's some chance someone else could have been there.
7 It's a very small probability, but possible.

8 Q What did you conclude, Mr. Koenig, was the difference in
9 time between Shots 25 and 28?

10 A The total difference between the two shots?

11 Q Difference in time, yes.

12 A One point - approximately one point four seconds.

13 Q Were you able to make a determination as to the location
14 locations from which Shots 29 through 35 were fired?

15 A Yes, sir.

16 Q I would ask you to step down and, making reference to
17 the overlay now covering D-10, which is D-10h, would you
18 indicate to the Court and the members of the jury where you
19 concluded Shots 29 through 35 were fired from?

20 A Yes, sir. Gunshots 29, 30, 32 and 34 were all fired
21 just east of the Recreation/Administration Building; and
22 Gunshots 31, 33 and 35 were fired just north of Vehicle
23 Number 10.

24 Q And what is the time differential, the time period,
25 Mr. Koenig, between the time Shot 29 and Shot 35 were fired?

1 A Approximately thirteen - approximately thirteen and a
2 half seconds.

3 Q Were you able, Agent Koenig, to make a determination as
4 to who had fired any of the Shots 29 through 35?

5 A Well, Gunshot 31, I see an individual on the right side
6 of Vehicle 10, but---

7 MR. COOLEY: Objection, Your Honor. The question
8 was whether he can identify or not. He hasn't been respon-
9 sive to that.

10 THE COURT: Well, can you identify that person?

11 THE WITNESS: It's kind of hard to answer the
12 question that way, Your Honor.

13 THE COURT: Well, you can answer it and then
14 explain.

15 A I couldn't identify such that I could say, "It's that
16 individual off some other place on the tape," but you could
17 see an individual firing Gunshot 31. I just couldn't get
18 enough descriptive data to say that I could identify him
19 some other place with a better picture. But you can see
20 someone firing that shot.

21 MR. LINSIN: At this time, Your Honor, I would
22 request the jury be permitted to view that portion of the
23 Channel 11 videotape which is within the time frame of
24 12:31:28 through 12:45:06.

25 (Whereupon, a portion of the Channel 11 videotape

1 was viewed.)

2 BY MR. LINSIN:

3 Q Would you indicate on the video, Mr. Koenig, when you
4 see the person firing Shot 31 that you discussed a moment
5 ago?

6 A We're past that point.

7 Q Okay. For the record, we have frozen at 12:33:27. Do
8 you see that individual on this portion of the videotape?

9 A It's very difficult to see. If you watch it over a
10 period of time, right before and right after, you'll see
11 movement, right through the front van window. And the van
12 door looks like it's open there; and you can see movement
13 back there. So you definitely can place, like I said, some
14 information there, what looks like a gunshot occurring. The
15 echoes---

16 MR. COOLEY: Objection, Your Honor, to "what looks
17 like a gunshot occurring."

18 THE COURT: Well, he's the expert.

19 MR. COOLEY: I know. But he's pointing to a place
20 an open window. He hasn't identified anything.

21 BY MR. LINSIN:

22 Q Well, what is it that you see on the video portion of
23 the videotape, Mr. Koenig, that leads you to believe that a
24 gunshot is occurring back there?

25 A We see indications, after watching it repeatedly, what

1 looks like a muzzle blast, smoke from the muzzle blast. It's
2 very slight and very difficult to see.

3 THE COURT: Well, point it out to the jury. Where
4 is it?

5 THE WITNESS: Well, it was right through this win-
6 dow. That's where you're going to see it, you can just see
7 some movement back there. We had to watch it repeatedly.
8 But again, no information can be see about the individual
9 doing it.

10 MR. COOLEY: Objection, Your Honor, and move to
11 strike this entire line of testimony. He just admitted he
12 didn't see---

13 THE COURT: Well, no. I'll permit it, but I think
14 it's incumbent on you to show the jury what you're talking
15 about on this.

16 MR. LINSIN: Let's back up just slightly here.
17 Okay. All right. Going very slowly forward, if we can.

18 BY MR. LINSIN:

19 Q Mr. Koenig, from 12:33:15 forward, with the film moving
20 very slowly, would you point out to the members of the jury
21 and to the Court what it is you are describing?

22 A Okay. You can see the little white area there, you can
23 see it moving. It's a person back there. If you watch it
24 very carefully, and when it comes up here, we see - in fact,
25 right then - what we perceive could be smoke from the blast.

1 We can't prove it, but we see indications of that.

2 Now the echo analysis put the individual there; we know
3 the gunshot occurred there. It's trying to visualize exactly
4 what we're seeing there.

5 Q All right.

6 MR. COOLEY: Your Honor, I object to what could be
7 seen.

8 THE COURT: Well, it's up to the jury; they've seen
9 it. They either accept Mr. Koenig's testimony or not.

10 You're the judges of the facts, ladies and
11 gentlemen.

12 BY MR. LINSIN:

13 Q Does that portion of the video that we have just viewed
14 we have now frozen again at 12:45:07 - contain the shots you
15 concluded were Shots 29 through 35?

16 A Yes, sir.

17 Q Mr. Koenig, did you reach a conclusion as to the loca-
18 tion from which Shots 36 through 39 were fired?

19 A Yes, sir.

20 Q With reference to Overlay D-10i, which is now covering
21 Exhibit D-10, would you indicate to the jury the location
22 from which those shots were fired?

23 A Gunshots Number 36 and 37 are just east of the
24 Recreation/Administrative Building. Gunshot 39 is just north
25 of Vehicle Number 10, and Gunshot Number 38 is just southwest

1 corner - the southwest corner of Vehicle 29.

2 Q Were you able to make a determination as to the identity of
3 any of the persons who fired those shots?

4 A No, sir.

5 Q With regard to Shot Number 38, did you obtain echo pat-
6 terns which permitted you to locate that shot?

7 A No, sir.

8 Q How is it, Mr. Koenig, you were able to locate Shot
9 Number 38?

10 A Gunshot Number 38 was fired so close to the camera and
11 microphone positions, which were just on the other side of
12 Vehicle 29, just east of it, that it just distorted the sound
13 into the mike because the gunshot sound was just so loud. So
14 we ended up just getting a microphone distortion, which
15 reflected that the gunshot had to be very close to that
16 position.

17 MR. LINSIN: At this point, Your Honor, I request
18 the jury be permitted to view that portion of Channel 11
19 which contains these four gunshots.

20 THE COURT: All right.

21 MR. LINSIN: For the record, that is from 12:51:23
22 through 12:56:23 on the Channel 11 videotape.

23 (Whereupon, a portion of the Channel 11 videotape
24 was viewed.)

25 BY MR. LINSIN:

1 Q Is that the portion of the Channel 11 videotape that
2 contained Shots 36 through 39, Mr. Koenig?

3 A Yes, sir.

4 Q Mr. Koenig, the overlays that we have discussed, both
5 Friday and today, which would be Overlays D-10b through
6 D-10i, inclusive, do those overlays accurately reflect the
7 locations from which the shots you were able to locate were
8 fired on November 3rd?

9 A Yes, sir.

10 Q And would the only exceptions to those be shots 3, 4 and
11 5?

12 A Yes, sir.

13 Q I would ask you again to step down, sir; and referring
14 to Overlay D-10j, which is now covering Government's Exhibit
15 D-10, ask you to describe what is displayed on that overlay,
16 sir.

17 A This is the summary of all the other overlays, listing all
18 the gunshots I located.

19 Q Does it fairly and accurately depict the locations at
20 which you concluded Shots 1, 2 and 6 through 39 were fired
21 from?

22 A Yes, sir.

23 Q Did you place the stickers on this overlay as well, sir?

24 A Yes, sir.

25 MR. LINSIN: At this time, Your Honor, I would

1 request that the jury be permitted to view the entire Channel
2 8 videotape, and thereafter I will request that the jury be
3 permitted to view the sequence on the Channel 11 videotape
4 containing all of the 39 shots.

5 THE COURT: All right.

6 MR. LINSIN: For the record, Your Honor, I believe
7 the Channel 8 tape is about five and a half minutes.

8 (Whereupon, the Channel 8 videotape was viewed.)

9 MR. LINSIN: Now, Your Honor, I would like to begin
10 the Channel 11 videotape at a point prior to the time
11 Mr. Koenig concluded the first shot was fired. And after
12 viewing this through the 39 shots, I would have one question
13 to pose to Mr. Koenig concerning this particular portion of
14 the tape that we are about to view.

15 THE COURT: Very well.

16 (Whereupon, a portion of the Channel 11 videotape
17 was viewed.)

18 MR. LINSIN: Just for the record, we started a
19 couple of moments earlier, but the portion I will ask you
20 about, Mr. Koenig, is from 10:11:15 up until the point after
21 the 39th shot was fired, and I will indicate that time for the
22 record once we get there. All right.

23 (Whereupon, a portion of the Channel 11 videotape
24 was viewed.)

25 BY MR. LINSIN:

1 Q Okay. We have now frozen the Channel 11 videotape at
2 13:05:21 and my question, Mr. Koenig, is this. If there had
3 been some break or some interruption in the recording equip-
4 ment that was used by the Channel 11 camera crew on that
5 date, between the time of 10:11:15 and 13:05:21, would you
6 have detected that interruption in the course of your
7 analysis?

8 A We only analyzed back - not quite back to 10:11, but
9 back to around 10:24, where you first see the cars on the
10 street. From that point, on through the end, 13:05:21, there
11 were no breaks.

12 Q And how can you determine that there were no breaks in
13 the recording equipment?

14 A One of the examinations I do all the time is called an
15 authenticity examination to determine whether tapes have been
16 altered or not. It's quite complex. But one of the things
17 you look at is these wave forms that we were looking at for
18 gunshots, these are the same wave forms you look at to deter-
19 mine if the tape has been altered. And with videotapes
20 they're very obvious. They're a lot easier to do that
21 audiotapes. Audiotapes, it's a lot easier to alter them.
22 These videotapes are much more difficult. They tend to knock
23 the visual out; it changes. And it's very obvious. And no
24 matter what you do in the way of splicing, it's very dif-
25 ficult to cover that up. So it would have been very obvious

1 to me, this detailed examination we did on this case, if
2 there was any breaks in it at all.

3 Q So do you have an opinion, Agent Koenig, as to whether
4 there was any interruption in the recording equipment between
5 the two times that you stated?

6 A Yes, sir, I have an opinion.

7 Q And what is that opinion, Agent Koenig?

8 A There absolutely are no breaks.

9 MR. LINSIN: With the Court's indulgence, at this
10 point we would request permission to move the large-scale
11 model into the well of the courtroom.

12 THE COURT: Very well.

13 BY MR. LINSIN:

14 Q Mr. Koenig, I would again ask you to step down, and ask
15 you to view what has been admitted into evidence as
16 Government's D-12. I ask you if you have seen that before,
17 Mr. Koenig?

18 A Yes, sir.

19 Q And on what occasion did you - what occasion did you
20 have to view Government's Exhibit D-12 prior to today?

21 A I had a chance to see it when I put the stickers on the
22 other government exhibit, 10-D.

23 Q And what did you do, if anything, in connection with
24 Government's D-12?

25 A I also put stickers on this exhibit, also.

1 Q Which shot stickers did you place on Government's
2 Exhibit D-12, Mr. Koenig?

3 A Not all of them. One and two is not on here, and
4 thirty-eight.

5 Q I ask you, sir, if necessary or if it would be of
6 assistance, to refer to D-10 and the overlay presently
7 covering D-10, which is D-10j, and just state which of the
8 shots you did not place - which of the shots you were able to
9 locate you did not place on Government's D-12?

10 A I placed all the gunshots except one, two and thirty-
11 eight. That's it.

12 MR. LINSIN: At this time, Your Honor, I would
13 request permission for the witness to remove the labels that
14 cover the shot stickers.

15 THE COURT: All right.

16 MR. GREESON: Once again, we object strenuously to
17 removing things instead of putting things on, if Your Honor
18 please.

19 THE COURT: Well, all right. Your objection is
20 noted.

21 BY MR. LINSIN:

22 Q Mr. Koenig, would you remove those pieces of tape and
23 paper covering shot placements as you had found them to be?

24 Okay. Now, Agent Koenig, once again, did you place
25 these stickers on D-12?

1 A Yes, sir.

2 Q Did you locate Shots 3, 4 and 5 on D-12?

3 A No, sir.

4 Q And you indicated that Shots 1, 2 and 38 were also not
5 indicated on D-12. Does D-12, as it presently stands,
6 accurately locate - accurately depict the location of Shots 6
7 through 37 and Shot 39, as you found those locations to be?

8 A Yes, sir.

9 MR. LINSIN: With the Court's indulgence.

10 At this point, I would request permission for any
11 member of the jury that may wish to be permitted to view this
12 exhibit. We have no further questions of this witness on
13 direct examination.

14 THE COURT: Would any member of the jury like to
15 step forward and look more closely at the model? If you wish
16 to, you may do so.

17 MR. LINSIN: Mr. Koenig, if you'd retake the wit-
18 ness stand.

19 THE COURT: You're through with your direct?

20 MR. LINSIN: Your Honor, we have no more questions
21 of the witness at this point. The United States would move
22 into evidence Overlays D-10b through D-10j.

23 MR. GREESON: We would object to those, Your Honor,
24 on the reasons previously stated---

25 THE COURT: Very well.

1 MR. GREESON: ---for the other government exhibits
2 that are pre-prepared.

3 THE COURT: Yes, sir. All right. Over defense
4 objection---

5 MR. LINSIN: I believe we have another objection.

6 MR. COOLEY: I would also object to the admission
7 for any reason other than to illustrate the testimony of
8 Agent Koenig, and ask the jury be instructed about these,
9 that these are for illustrative purposes.

10 THE COURT: Yes.

11 These exhibits portray the expert opinion of the
12 witness. And again, the testimony of this expert can be
13 accepted or rejected by you based on whether you believe that
14 his opinion is a firm foundation of fact; and these exhibits,
15 what we call demonstrative exhibits, are admitted to
16 demonstrate his testimony. You can either accept them or
17 reject them. Do you understand that? All right.

18 Any other objections to these exhibits?

19 Well, over the objection stated on the record by
20 counsel previously, these exhibits, D-10b through D-10j, will
21 be received into evidence.

22 - - - - -

23

24

25

1 (The overlays above
2 (referred to were received
(into evidence as:

3 (GOVERNMENT'S EXHIBITS
4 (D-10b THROUGH D-10j,
(INCLUSIVE.

5 MR. LINSIN: Thank you, Your Honor.

6 THE COURT: All right. Now it's almost time for
7 lunch, so why don't we adjourn at this time.

8 MR. GREESON: Your Honor, may I ask for a few minu-
9 tes more at the lunch break today? Mr. Cooley and I have
10 some matter to take care of, and anticipate that it might
11 take a little longer than we get.

12 THE COURT: How much time do you want?

13 MR. GREESON: Well, I'd like to have an hour and a
14 half, Your Honor; but if that's too much, we'll just do what
15 we have to.

16 THE COURT: Why don't we make it--- Let's see.
17 It's twenty after 12:00. Why don't we come back - have the
18 jury come back at a quarter to 2:00.

19 MR. GREESON: Thank you, Your Honor.

20 THE COURT: All right. So you're excused for lunch
21 until a quarter to 2:00, ladies and gentlemen. And don't
22 discuss the case during the recess period. All right.
23 You're excused.

24 I want to stay on the bench for a second.
25 - - - - -

1 (Jury out at 12:20 P.M.)

2 THE COURT: I'd like to see counsel at the bench
3 for a few minutes.

4 (Bench conference on the record.)

5 THE COURT: Who has been designated - who will exa-
6 mine this witness principally?

7 MR. GREESON: We actually have more than one, Your
8 Honor. I think I'm going to lead off. Mr. Bost may be next,
9 or Mr. Porter. But those three of us, I think.

10 THE COURT: You will be the principal?

11 MR. HALL: Your Honor, I will conduct some cross
12 examination.

13 MR. GREESON: Everybody has some.

14 THE COURT: Everybody has some, but the principal,
15 of course, will be Mr. Greeson, Mr. Bost---

16 MR. BOST: Well, I'm not really principal. I've
17 got some questions. I'm like everybody else.

18 THE COURT: Yes.

19 You'll be the principal cross-examiner?

20 MR. GREESON: Yes, sir.

21 MR. PORTER: We would start with Mr. Greeson and
22 then back to me and then on around.

23 THE COURT: All right. Greeson to Porter, okay.
24 That's what I wanted to know. There's no point in repeating,
25 you know, the cross examination. That could get you in trouble.

1 MR. HARWELL: I didn't hear him mention Mr.
2 Griffin's name.

3 THE COURT: Okay. So 1:45. All right.

4 MR. GREESON: Oh, Your Honor, the government's
5 exhibits previously introduced, are they in the custody of
6 the government instead of the Clerk?

7 Could I have them brought into the courtroom at the
8 lunch break?

9 THE COURT: I think that is a reasonable request.
10 They're in evidence. Really, they should be in the custody
11 of the Clerk when they are in evidence.

12 MR. LINSIN: We would be happy to make that
13 arrangement, Your Honor.

14 (Luncheon break at 12:25 P.M., until 1:45 P.M.)

15

16

AFTERNOON SESSION

17

1:45 o'clock P.M.

18

THE COURT: Mr. Bell?

19

20 MR. BELL: Thank you, Your Honor. I have two very
21 brief preliminary matters to raise with the Court. The first
22 is that as its next witness the government intends to call
23 Mark Sherer. As the Court and counsel for the defendants
24 know, Mr. Sherer has stated that he wishes to withdraw from
25 his plea agreement and has advised counsel for the United
States that his attitude toward the government is one of 100

1 percent noncooperation, to use his words.

2 I do not know and can't predict what Mr. Sherer
3 will do when he gets on the stand, but I wanted to bring that
4 to the attention of the Court and the parties, on the record.

5 THE COURT: All right.

6 MR. BELL: There is one other matter I want to
7 raise also, before commencing the cross examination of
8 Special Agent Koenig. I noted that in the cross examination
9 of some of the other witnesses that a number of the defense
10 counsel characterized some of the shots fired at the inter-
11 section of Everitt and Carver as "communist shots." The
12 government would object to that characterization unless and
13 until it can be established by the defense that a member of
14 the Communist Workers Party fired the shots that they're
15 referring to. It is not in keeping with the Court's Order in
16 Limine that the defense should be allowed to prejudice the
17 government's case and prejudice the jury unfairly by charac-
18 terizing shots as being "communist shots," unless and until
19 it can be established that they are. And so the government
20 will object to any of that sort of characterization.

21 Thank you, Your Honor.

22 THE COURT: Any response?

23 All right. Bring the jury in.

24 MR. JENNINGS: I'd like to respond to that, if I
25 may.

1 THE COURT: All right. Hold the jury a second,
2 please.

3 MR. JENNINGS: The government has consistently
4 referred to certain shots as being fired by Klan members or
5 by the, quote, "the Klan," end quote, and there's been no
6 showing by the government yet that those were the parties who
7 fired the shots. There's no showing that there was any guns
8 there involved or anything else. And Mr. Bell's opening
9 statement was full of remarks that the Klan - the Klan did
10 this and the Klan did that.

11 Your Honor, in fairness, I think the government's
12 statement that - objecting to these shots as "communist
13 shots" is - it should be equal. If we can't refer to those
14 as communist shots, then they should not refer to these other
15 shots as Klan shots. It's fundamental fairness.

16 MR. BELL: Well, Your Honor, when I made my opening
17 statement I was referring to evidence that the government
18 intended to prove, and the government does intend to prove
19 that the first eleven of the thirty-nine shots were fired by
20 Klansmen, and that's going to be part of the government's
21 evidence. And the government seriously doubts that the
22 defense is going to be able to prove that all of the shots
23 fired by the demonstrators were fired by communists.

24 The evidence I think is going to show that not all
25 of those people were members of the Communist Workers Party.

1 THE COURT: In their opening statements, as I
2 recall, there was some reference made to the fact that they
3 intended to show that certain of these shots came from the
4 Communist Workers Party, isn't there?

5 Didn't you make that statement?

6 MR. GREESON: Yes, Your Honor.

7 THE COURT: So I think it cuts both ways. I'll let
8 them refer to certain shots as being from the - more
9 correctly it should be Communist Workers Party, shouldn't it?

10 MR. JENNINGS: All right, sir.

11 THE COURT: All right. Go ahead.

12 Bring the jury in.

13 MR. HARWELL: Your Honor?

14 THE COURT: Wait a minute. Hold it.

15 MR. HARWELL: I'm not responding. But I might
16 offer that I don't know what Mr. Sherer is going to do when
17 he gets on the witness stand either. Mr. Keith is not here,
18 Your Honor.

19 THE COURT: Oh. What happened to Mr. Keith?

20 MR. HARWELL: I don't know.

21 THE COURT: Oh. Well---

22 MR. HARWELL: He left the building at lunch, and I
23 don't know where he went. But at any rate, he's not here.

24 THE COURT: Well, maybe we'd better wait, out of an
25 abundance of caution. Who is he representing?

1 MR. HARWELL: Mr. Dawson.

2 THE COURT: Mr. Dawson.

3 MR. HARWELL: Mr. Dawson is here.

4 THE COURT: Mr. Dawson, will you waive your attorney's presence, or do you want to wait until he gets here?

6 DEFENDANT DAWSON: No, Your Honor; I think we better wait.

8 THE COURT: All right. We'll wait.

9 DEFENDANT DAWSON: Thank you.

10 THE COURT: All right. Wait until he gets here.

11 MR. GREESON: I'm sure he'll be here in a minute, Judge. I don't know where he might be.

13 MR. FARRAN: Your Honor, I think Mr. Keith may be in one of these conference rooms. May I go check?

15 THE COURT: Yes, why don't you go check.

16 MR. BELL: Your Honor, if I may, I'd like to add something to the comments I was making a moment ago. And that is, while certainly the government referred to the shots as being fired by Klansmen in my opening statement, we have not referred to any particular shots during examination as being fired by Klansmen or communists. We have referred to them as being fired by particular individuals, as Mr. Linsin did on his examination of Mr. Koenig.

24 Now the opening statement is meant to summarize the government's evidence, and it would seem that it is certainly

1 called for and appropriate to say what the evidence is going
2 to show during the opening statement. But it is another
3 thing to ask questions that don't have any basis or any fact,
4 on the record, as referring to people who fired particular
5 shots as "communists" would be at this stage of the pro-
6 ceedings.

7 THE COURT: Well, I don't think it makes a great
8 deal of difference. I'll adhere to my previous ruling.

9 Bring the jury in.

10 (Jury in at 1:55 P.M.)

11 THE COURT: All right, Mr. Greeson, you may cross
12 examine.

13 MR. GREESON: Your Honor, I had asked for one of
14 the exhibits to be brought into the courtroom, that has pre-
15 viously been introduced by the government, and it's on the
16 way now, and I think I can go ahead and ask a couple more
17 questions before it gets here.

18 THE COURT: All right.

19 CROSS EXAMINATION

20 BY MR. GREESON:

21 Q Mr. Koenig, did you bring any visicorder graphs with
22 you?

23 A No, sir.

24 Q You don't have any in the City of Winston-Salem or
25 anywhere nearby?

1 A No, sir.

2 Q So there's no way that we're going to be able to show
3 the jury what one of these transient sounds, when reduced by
4 the visicorder, looks like, is there?

5 A Other than the one chart I brought, it showed what one
6 looked like.

7 Q All right, sir. You're referring to Government's
8 Exhibit D-24, are you not?

9 A Yes, sir.

10 Q And you're referring to this part right here
11 (indicating), that you say shows something about what a sound
12 wave looks like---

13 A That's correct.

14 Q ---when recorded? Now in actuality, the transients that
15 you looked at on each of these shots that you testified to
16 are quite a bit different looking from this simple drawing
17 here?

18 A Well, they're more complicated, because there's more
19 echoes.

20 Q Did you make this chart, by the way?

21 A Well, I sketched out and an artist rendered it.

22 MR. GREESON: Mr. Porter, could you help me just a
23 second - lift this down on the floor?

24 BY MR. GREESON:

25 Q Mr. Koenig, if you would, I'll ask you to come over here

1 to this pad. All right. Now the first thing I want you to
2 do--- Let me interrupt just to get this one little job done.
3 This is Government's Exhibit D-21 right here. And if you'd
4 just step right over here, I have prepared this ruler of
5 sorts, and I want you to compare it to the ruler that appears
6 on Mr. Richards' drawing there, and confirm that my lines are
7 approximately right on that measuring stick. It isn't real
8 fancy.

9 A Approximately, yes.

10 Q All right. That could be used then on this map, as
11 well as on the other map, which is the same as Mr. Richards'
12 scale; is that correct?

13 A It's about the same scale, yes.

14 MR. LINSIN: Your Honor, could counsel for the
15 government see the ruler that Mr. Greeson is referring to?

16 MR. GREESON: Sure. Here, you can hold onto it
17 while I'm asking questions.

18 BY MR. GREESON:

19 Q If you would, take this Magic Marker and draw for the
20 jury a transient, so they'll have an idea about what one
21 looks like.

22 A A single transient?

23 Q Yes. You can pick any. Do you recall what some of them
24 looked like, right off? I mean, all this is, is a replica.
25 It doesn't have to be exact or anything. I want them to see

1 what a transient looks like, and I want you to be able to
2 demonstrate to them how you found the echo in a transient.
3 So of course you'd have to use one that has an echo.

4 How about number one, do you recall anything about what
5 that looks like?

6 A It's a very complicated thing for me to draw. I can
7 write it for an example.

8 Q Just do an example then. No specific shot.

9 A It's kind of going downhill a little bit, but---

10 Q It would be straight if it was on the paper?

11 A Yes.

12 Q Now can you give us a replica out here of exactly what
13 the time code looked like that you had engrafted onto the
14 second channel?

15 MR. HALL: Your Honor, may I have this moved so
16 these lady jurors can see?

17 THE COURT: Why, yes. All right. Fine.

18 MR. GREESON: We might move this, too (indicating).
19 Let's just move the whole thing out so they can see.

20 MR. GREESON: Your Honor, can you see?

21 THE COURT: Yes. That's fine.

22 Can all the jurors see it?

23 THE JURORS: (Nod their heads up and down.)

24 A Well, the time code that's put on there is also extre-
25 mely complex. It's basically got a sign wave - it kind of

1 looks--- I can't draw it fine enough.

2 MR. GREESON: This one might have more juice
3 (indicating.)

4 A Like I said, it's very tight for high resolution.

5 BY MR. GREESON:

6 Q And this just runs right along the whole length of this
7 long piece of paper?

8 A Yes, sir. We plot both of them at the same time.

9 Q Okay. Now if you would, explain what you have, what
10 you've drawn here. What is this peak? Is that called a peak
11 (indicating)?

12 A Anything like that would be fine.

13 Q Okay. Tell the jury what that represents.

14 A That's the gunshot, the actual gunshot blast itself.

15 Q Is it possible for you now to draw a replica of an end-
16 wave so that we could see what that looks like?

17 A It again---

18 THE REPORTER: I'm sorry. I couldn't hear the last
19 thing you said.

20 THE COURT: Yes. Keep your voice up, please.

21 A I drew it as best I could. It's kind of a complicated
22 wave form.

23 BY MR. GREESON:

24 Q Okay. It looks very much like this one you drew. Did
25 you mean for it to?

1 A It doesn't look exactly. I mean, to me it looks very
2 different, but it certainly has a transient characteristic to
3 it.

4 Q Now is the end-wave separated by some--- Actually, if I
5 could have that a minute. If this was running along, there
6 would be some chatter or noise in the line also; you don't
7 get a straight line, you get some irregularity maybe?

8 A Very minor.

9 Q Right. Minor.

10 Would you have a blank space in between the end-wave and
11 the muzzle blast?

12 A It varies. Sometimes if you have a gunshot---

13 MR. COOLEY: Excuse me. We still have some jurors
14 who can't see over here. Would you like me to move this
15 thing out of the way?

16 THE COURT: Yes. All right.

17 A It would vary, this distance here (indicating) would
18 vary by how supersonic the gunshot was. If, for instance, it
19 was 3,000 feet per second, three times the speed of sound,
20 approximately, this would be wide. If it was barely greater
21 than the speed of sound, it would be, you know, right up
22 here, coming along right - right in with the transient.

23 BY MR. GREESON:

24 Q Okay. So the slower the shot, even though it's super-
25 sonic, the closer it gets to the original muzzle blast?

1 A Right.

2 Q All right, sir. Now you have come down here, and I
3 assume that's an echo. Is that correct?

4 A That's correct.

5 Q Now if you would, show the jury how you use your time
6 code and your graph here to measure time. Then I'm going to
7 ask you to convert the time to feet, if you can.

8 A The time code is normally used just to tell you what
9 time it is. If you had a tape recorder with a time code, it
10 would just read the time out above the tape recorder, so many
11 seconds and minutes and hours and days, whatever the par-
12 ticular time code is.

13 For convenience of accuracy, we put a time code on when
14 we recorded the audio information, to allow us to go back and
15 very accurately know what the time is - not in the sense of
16 real time, of what day it is, but in comparison between the
17 various gunshots. And this time code has basically a
18 1,000-cycle sign wave on it, plus additional information,
19 which increases the resolution, which allows you to easily
20 get into the, like, one ten-thousandths of a second resolu-
21 tion. It's a standard - the time code we use is called an
22 IRIG "B." It's a real - it's probably the most common time
23 code available. It was used simply to be able to measure
24 from here to here (indicating), and from here to the next
25 gunshot, very accurately. It's a very common method.

1 Q All right, sir. Now did you actually take a straight
2 edge in order to get from the peak up to the time code? In
3 other words, did you just eyeball it, or---

4 A No. We used something to get very parallel with the
5 edge of the paper, a T-square type.

6 Q So you took it off the edge of the paper?

7 A Yes.

8 Q You assumed the paper was straight?

9 A Yes, yes. The paper is straight, see. So then we can
10 put a T-square right on up and measure it directly up to the
11 peak, and where it hits on here, we can mark it there and
12 then decide to come down to this one and that's how it's
13 done.

14 Q All right, sir. Then how do you measure from here to
15 here after you've established that this echo occurs here and
16 this muzzle blast occurs here?

17 A We actually read the time code directly off of the sign
18 wave and the time code.

19 Q Well, the time code doesn't have any numbers on it, it
20 just has symbols; is that right?

21 A Symbols? No. It's another wave form.

22 Q It's another wave form. Well, you have to count the
23 peaks in between, do you not?

24 A Well, you can learn a shorthand to read the time code.
25 It has certain glitches in it that we plotted, that's a

1 second in time. And if you have to go long distances, you
2 can measure that a little quicker than that. For short
3 distances, like echoes, you do just what you alluded to, you
4 actually count it on down.

5 Q All right. Was the second wave that came in always a
6 lower peak---

7 A Not always.

8 Q ---than the first echo? I mean--- Did I say "echo"?
9 Is the second echo always a lower peak than the first echo?

10 A No.

11 Q How can you account for that?

12 A It depends on what it's bouncing off of. In other
13 words, if it goes off the side of a building, the echo is
14 going to be louder than if it goes off, for instance, a
15 windshield of a car.

16 Q All right, sir. Did you use some echoes off of car
17 windshields in plotting some of your - some of your
18 locations?

19 A Well, parts of cars, the windshields, whatever we could
20 find with a flat area that would allow this angle - allow
21 this echo to bounce off, so it went from the camera to the
22 position.

23 Q Yes, sir. Like the back of a Honda is more flattened
24 than perhaps some other car and would be more usable than---

25 A We had to take it car by car to see if we got an echo

1 off of it.

2 Q And depending on what kind of car it was, you then
3 determined whether or not you wanted to use it?

4 A That's correct. You'd have to see if there was anything
5 there that you could get an echo off of at that angle.

6 Q Now let's assume that this is three-tenths of a second.
7 Would that be---

8 A That's a long time.

9 Q Well, let's see. How far down the road was number one,
10 192 feet from the corner of the 1 SB apartments?

11 A It could be. I'd have to look at my notes.

12 Q Well, approximately. Say 200 feet.

13 A Okay.

14 Q How many tenths of a second would it take for the echo
15 to get back--- Excuse me. ---for the initial muzzle blast
16 to get to the microphone if it was 200 feet away?

17 A It would be 200 feet over the speed of sound--- I don't
18 have a calculator.

19 Q Can you use mine?

20 A That would equal .1797 seconds.

21 Q .1797 seconds?

22 A Yes, sir.

23 Q All right, sir. Now how do you convert that to the
24 number of feet that the muzzle blast traveled?

25 A You just told me the number to use.

1 Q Oh, I'm sorry. We started at the wrong end. All I'm
2 saying was, for a 200-foot muzzle blast - and you were going
3 to end up saying that it was 200 feet in a straight line away
4 from you - you would have had a time code reading of .1797
5 seconds?

6 A Exactly.

7 Q All right, sir. I'm trying to figure out how we can do
8 this so we can see both things. The second echo - I mean,
9 the first echo, then--- Now wait a minute. What you've just
10 measured is from the initial muzzle blast to the first echo?

11 A Correct.

12 Q And you found that to be .1797 seconds?

13 A Yes.

14 Q Did that give you the muzzle blast?

15 A I don't understand the question.

16 Q I'm sorry. Did that give you the distance the muzzle
17 blast was away from the microphone by measuring that?

18 A No.

19 Q Okay. How did you determine the original distance of
20 the muzzle blast, is what I'm getting at.

21 A We didn't--- You can't compute that directly, because
22 what happens is, the gunshot is here. In actuality, it
23 occurred in time over here; and if it went 200 feet, it would
24 have to go the .1797 seconds before we saw anything on the
25 recorder. So you couldn't, from the wave forms, say it had

1 to be 200 feet away. You'd have to use that echo analysis to
2 determine where the thing was located.

3 Q Okay. This is almost two-tenths of a second?

4 A Yes.

5 Q And at the speed of sound on that day, it would take
6 approximately two-tenths of a second for an echo - I mean,
7 for a muzzle blast to reach the microphone?

8 A If it was about 200 feet away.

9 Q If it was 200 feet away.

10 A Yes.

11 Q All right, sir. Now what would you find in the way of
12 an echo? How would you measure the first echo?

13 A Well, we start - we measure everything from the gunshot.
14 Now again, the end-wave caused other problems because it
15 also causes some echoes. But again, they're repetitious
16 usually with gunshots, that's not enough to--- The same as
17 if there was no end-wave on this one. We'd go to the first
18 one and we'd measure that distance, we'd measure the second
19 distance and we'd measure the third distance. And from that -
20 I related it this way. What if we didn't know this distance.
21 Then we could do - distance would equal, you know, the time up
22 there, if we measure directly, times - times the speed of
23 sound, which is 1,113 feet.

24 Q Okay. So this reading multiplied by 1,113, the speed of
25 sound, gives you the distance?

1 A Correct. If the time is one second, it would be 1,113
2 feet.

3 Q All right, sir.

4 MR. GREESON: Mr. Linsin, would you have any objec-
5 tion to my using this piece of evidence to illustrate his
6 testimony?

7 MR. LINSIN: Could you address the Court with what
8 you're introducing?

9 THE COURT: All right.

10 MR. GREESON: Do we need to approach the bench?

11 MR. LINSIN: Well, I---

12 MR. GREESON: I just want to ask him about this
13 exhibit. I wanted to see if he had any objections before I
14 did it.

15 MR. LINSIN: Well, I'm just used to addressing
16 these matters to the Court.

17 THE COURT: Well, go ahead.

18 MR. GREESON: Well, I'll just go ahead and ask the
19 question then, and you can object if you want to.

20 BY MR. GREESON:

21 Q I'll show you what has been marked, or what will soon be
22 marked, Defendants' Exhibit Number 1, and it has a plastic
23 overlay over it which we will mark as Defendants' Exhibit
24 Number 2 for identification purposes. And I want to ask you,
25 first of all, if you recognize what this represents?

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(DEFENDANTS' EXHIBIT
(NOS. 1 AND 2.

A Well, this is a one-inch-to-five feet scale model, I believe, of the Everitt and Carver intersection.

Q Right. And we just agreed that this ruler that we have over here is accurate with this ruler that's attached to it?

A Correct.

Q This is the chart that Mr. Richards drew, or testified to the other day that he had created from his photogram-metrics; is that correct?

A I didn't hear the testimony, but---

Q Okay. At any rate, do you recognize it as being a chart of the intersection?

A Correct.

Q Now if you would, let me swap you a grease pencil for a Magic Marker. Make a circle, if you would, where Shot Number 1 was, or approximately. We know this is not exact. Your other charts have been exact.

And could you just black it in so we can make sure we see it - or blue it in?

Would you put another mark, a blue mark if you would, at the point where you determined the cameraman was at the time of Shot Number 1?

1 A I didn't put it down in my notes exactly where it was.
2 We matched it out so that it would fit. It's approximately
3 this area (indicating).

4 Q Just approximately is all we need. I just want you to
5 illustrate how you did it.

6 All right, sir. Now you ran the audiotape - you ran the
7 audiotape through your visicorder, you came out with the time
8 code that you've just illustrated and the visual represen-
9 tation of this gunshot?

10 A Correct.

11 Q Now I know that you don't recall everything exactly, but
12 I recall your testimony that you had a little trouble with
13 this bus here, and you knew that if a shot was here
14 (indicating), and your cameraman was approximately here, that
15 you ought to get a good angle off of this building?

16 A Correct.

17 Q And you weren't getting it. And so you realized that
18 the bus was in the way and partially - what, making it not as
19 noticeable? What was your word?

20 A I don't remember my exact word, but it certainly blunted
21 the transient.

22 Q Blunted; all right, sir. But you were finally able to
23 get an echo that you say came off this building?

24 A Correct.

25 Q Now I note once again that it would take too long with a

1 protractor, but if you would, throw an angle approximately
2 like the one that you used off of that building.

3 All right, sir. Now the echo that you got from the
4 visicorder, the information that you got, was the total
5 number of feet. Let's say, once again, that this example we
6 used was referable to Shot Number 1 and you got the figure
7 200, 200 feet. That's 200 feet, the whole length of that
8 angle, is that right? Did you find an echo that was 200
9 feet? It took 17 seconds to get there?

10 A Point one seven seconds.

11 Q Point one seven seconds to get there?

12 A Not totally. You'd have to subtract this distance here
13 (indicating).

14 Q All right. Explain that to me.

15 A Okay. Let's say this distance is a hundred feet. Go
16 from here to here. So the gunshot, where it occurred, to the
17 microphone was 150 feet.

18 Q All right, sir.

19 A Let's say this echo - we're going here to here - is 200
20 feet.

21 Q Yes, sir.

22 A Then the echo would appear 100 feet, in time, after the
23 original gunshot, which would be something like .08 seconds.

24 Q All right, sir. Now you didn't know what this angle
25 was, or the exact point at which it bounced off of the

1 building, did you?

2 A Well, we knew that this angle here and this angle right
3 over here had to equal each other.

4 Q Right.

5 A So when we first started out we just had to - again,
6 this was a lot of just trying various spots.

7 Q Did you have two straight edges that you actually got up
8 on the map and angled around to---

9 A We had some precision rulers we used to go there and
10 there, and we have a protractor here (indicating), and we
11 moved the rulers where we thought they were, and then get the
12 angles so they were correct.

13 Q All right, sir. Now one echo wasn't enough to place
14 that Shot Number 1, was it?

15 A Not completely, no.

16 Q Do you recall how many echoes you had on that shot?

17 A Three or four big echoes and a lot of small ones.

18 Q All right, sir. Do you recall where the second echo
19 would have been?

20 A Yes. We got one echo off the bus. Of course, that
21 would be a very short duration, just go a little bit out of
22 the way, one slant on the bus. Again, that would get there
23 only slightly after the original muzzle blast.

24 Q Right.

25 A I believe we also got one off this building down here

1 (indicating).

2 Q All right, sir. You don't know what this building is,
3 do you - the laundromat building, do you recognize it as that,
4 or it's just a building?

5 A It's just a building.

6 Q All right. Okay. So when you got through plotting the
7 three echoes here, and you also had the visual information
8 from the smoke---

9 A Well, that put us in the ballgame, that didn't tell us
10 that's where it had to be. We saw smoke. We thought that
11 was a good place to start.

12 Q So this was a little easier one than some, because you
13 had some visual information?

14 A Yes, sir.

15 Q The same thing with Shot Number 15, which I believe -
16 and 19, which you were on the sidewalk right in here?

17 A Correct.

18 Q Now this is an area, once again, where you don't have
19 much echo information?

20 A That's correct.

21 Q You had some?

22 A Some, but it was very little.

23 Q All right. If you would, take a different color here -
24 try orange - and make a red dot where the cameraman was at the
25 time Number 15 was fired.

1 A Okay. Approximately?

2 Q Approximately. And approximately where the shot was
3 fired.

4 A (Indicating.)

5 Q Now did you place this shot solely from visual
6 information?

7 A Yes.

8 Q You didn't use any echoes at all?

9 A There's echoes there that would be characteristic of a
10 shot occurring there, but not sufficient to say that it had
11 to be at a certain place.

12 Q All right, sir. You would have gotten one echo off of
13 the back of a wall behind the cameraman, wouldn't you?

14 A Correct.

15 Q Would you draw that one in?

16 A (Indicating.)

17 Q All right, sir. And that would arrive very shortly
18 after the muzzle - original muzzle blast, wouldn't it?

19 A Right. We could see it, but it's not sufficient in our
20 mind to make it the final determination.

21 Q All right, sir. How long - if you would use this ruler,
22 tell me approximately how long that echo and muzzle blast is.

23 A That's two questions in one.

24 Q I said approximately. They both would be very close, I
25 assume, so you could tell the difference on--- That's not a

1 very precision yardstick, I know.

2 A All right. It looks like about 88 feet from the muzzle
3 blast to the microphone, maybe about a hundred and five feet,
4 total, from - for the echo.

5 Q All right, sir. If you would, make that same--- Well,
6 hang on just a second.

7 I assume if a shot were fired in this area right up in
8 here (indicating), that it would have approximately the same
9 distance to travel, if there was an echo off of that wall?

10 A I don't exactly understand your question.

11 Q If another shot were fired right up in this area right
12 here---

13 A You mean echo---

14 Q ---if it traveled, you know, approximately the same, is
15 it possible that you could have gotten an echo off the back
16 of this Honda - on Shot Number 15?

17 A My recollection of looking at it is, the slope of the
18 Honda was sufficient that that echo would not hit here and
19 end up over here (indicating).

20 Q Now if you would, assuming that this is - knowing this
21 is very approximate - how far is it from there to the end of
22 the building?

23 A About forty feet.

24 Q All right, sir. So if this gun were moved down this way
25 about forty feet, or no more than forty feet, you would still

1 have a chance, would you not, of getting an echo off c is
2 building?

3 A Actually, it would go down more than 40 feet, bec
4 the angle gets more shallow as you go down.

5 Q Do you have an opinion as to about how much more yo
6 could take - in other words, if you got way on down here, it
7 would be coming at a more acute angle, and---

8 A I'd have to measure it out on the wall, but it's cer-
9 tainly easy to do.

10 Q All right, sir. How far is it from--- Well, let me ask
11 you to do one more shot for me before I do that. Let's take
12 one of the shots that occurred down in this area here
13 (indicating), if you would. Let me give you another c r.
14 How about green?

15 A Any place in here?

16 Q Yes, any one you--- This is just approximate. Show me
17 what kind of echoes you would expect to get with the same
18 camera location.

19 A You'd get a very large echo coming off of this building.
20 We also were picking up a little bit off of the windshield of
21 this car right here, right in this area. We also pick up an
22 echo again off the back building, which would be a farther
23 distance from up here because the angle is more slanted The
24 farther down the street, the more distance you get. They
25 would be the main echoes. Again, you would pick up a lot of

1 small echoes.

2 Q All right, sir. Now when you say that you get minimal
3 echoes from any shots fired in this area, what do you mean
4 besides the - what other echoes were you getting on minimal -
5 that were minimal, besides the one off the back wall?

6 A You get echoes, for instance, off the street.

7 Q But they'd go down and back up?

8 A Correct. You also get echoes, like - I said there was
9 no major echo off the back of the Honda. The sound hits
10 it and disperses instead of breaking off sharply, you know, a
11 rounded surface, it will just go in all kinds of directions.
12 So what happens is, you get very low-level echoes. It's very
13 hard for me to say it came off there.

14 Q Let me give you a black pencil, if I have it. I ask you
15 to reproduce, if you would, the area from which you said -
16 the area north of Carver, which you said three and four and
17 five may have come from, the one you pointed out for
18 Mr. Linsin but he didn't have you write on anything.

19 A Okay. Just approximately?

20 Q Oh, yes, sir.

21 All right, sir. Now because of the minimal echoes, you
22 were unable to say that you could place those as you had
23 placed the other 36?

24 A Correct.

25 Q All right. Now you say that there was another area, and

1 we'll have to get the---

2 MR. GREESON: Mr. Linsin, could I use your overlay
3 to draw the other area?

4 MR. LINSIN: I would appreciate it if you do not
5 draw on the overlay.

6 MR. GREESON: You don't want him to draw that out
7 area.

8 MR. LINSIN: You may ask him to describe what the
9 particular area is, for the record, Mr. Greeson.

10 BY MR. GREESON:

11 Q As I recall your previous testimony--- Well, let me ask
12 you, where is the--- You said that you were 99 percent sure
13 that it was within this area right here (indicating)?

14 A Correct; limited to this area.

15 Q Yes, sir. And then you drew another square within the
16 one, didn't you?

17 A I believe that's true, yes, sir.

18 Q All right. Let me get you to draw that one in which you
19 said that you were 97 to 98 percent sure that it came from
20 within that smaller area.

21 A My recollection is that it was just slightly inside this
22 one.

23 Q If you would, help me carry this up just a little bit
24 closer to the jury. Mr. Cooley just said that we are a
25 little bit far back.

1 Bruce, if you would - you've still got your black - if
2 you could make the black and the red a little bit darker for
3 me.

4 MR. GREESON: Mr. Porter, Mr. Bost, or somebody---
5 BY MR. GREESON:

6 Q Mr. Koenig, would you help me hold this up?

7 Mr. Koenig, this has been identified as Government
8 D-19c. I don't know if you can--- Get over there in front
9 of the jury so they can see it. And it's been previously
10 introduced into evidence. And I'll ask you if that's not the
11 same map - not the very same copy, but the same drawing that
12 you previously put your shots on at the former trial, a map
13 that size?

14 A Well, I don't think we used the whole map; I think it
15 was only part of the way down.

16 Q My question to you is, this is a replica of the map that
17 was up on the wall, that you did your pointing to?

18 A My recollection is that this part down here was not
19 shown in court, the farther west part of the graph. I think -
20 I can't remember how much of it down here was showing. I
21 don't believe it went all the way down here.

22 Q Do you recall the map that was on the wall directly
23 behind you while you were testifying?

24 A I remember - like I say, my recollection is that it's
25 about the same thing, but it didn't include all the areas to

1 the east and the west. That's just my recollection.

2 Q Okay. But it could have been this size, but that's not
3 what you now recall?

4 A That's correct.

5 Q All right, sir.

6 MR. GREESON: You-all can fold that up and put that
7 away.

8 BY MR. GREESON:

9 Q Now when you testified previously, you testified for me,
10 didn't you?

11 A That's correct.

12 Q And this time you testified for the government first?

13 A That's correct.

14 Q Now when you testified previously you said that there
15 was a one percent chance that the Shots 3, 4 and 5 could have
16 come from somewhere else, didn't you?

17 A On the chart that I was looking at, that I recollect as
18 being this size, that's still a correct statement.

19 Q And you're saying you never had one bigger than this?

20 A My recollection of the question was, I was asked on
21 this chart right here, where were they most likely fired; and
22 my answer is still the same, that it's 99 percent probability
23 that it came in this area.

24 Q You also testified that you could say where they didn't
25 come from, but not exactly where they did come from?

1 A That's a correct statement.

2 Q Let me ask you if you recall your testimony previously.
3 You were asked the question:

4 "Mr. Koenig, I direct your attention to Shots
5 Number 3, 4 and 5, and ask you, sir, if you can
6 determine from your analysis the location of those
7 three shots."

8 And you replied: "Those three shots are distinc-
9 tive of all the shots I was able to do, because we
10 couldn't get an exact location. We found that they
11 most probably occurred in this area, somewhat
12 bounded like this, maybe possibly the middle of the
13 street. We have no visual information and the
14 sound information on the recording is very limited,
15 it has a very limited amount of information. So
16 most likely, like in 99 percent accuracy, it is
17 within this area. I did not locate the exact" -
18 there's a word missing there - "I could not locate
19 the exact - within the area of those three shots."

20 Do you recall that question and that answer?

21 MR. LINSIN: Your Honor, could we have a page
22 reference to the---

23 THE COURT: Yes.

24 MR. LINSIN: ---transcript Mr. Greeson is reading
25 from?

1 THE COURT: Do you have a page reference?

2 MR. GREESON: That's Page 19 of his state court
3 testimony - excuse me - Page 18, beginning Line 14, and con-
4 tinuing on to Page 19.

5 BY MR. GREESON:

6 Q And then do you recall being asked the question:

7 "The area that you have reference to, could you
8 delineate that by any fixed measure?"

9 And you gave the answer: "It's basically north of
10 the intersection of Everitt Street and Carver
11 Court."

12 Would you point out north of the intersection of--- Okay.

13 "Approximately slightly north of the edges of the
14 buildings of the Morningside Homes Recreation
15 Building---"

16 Where would that be?

17 A Right here (indicating).

18 Q "---and the One SB apartment."

19 Do you recall that question and that answer?

20 A Yes, sir.

21 Q Okay. And then you were asked the question:

22 "Would you take three, four and five and affix them
23 in the area that you just designated, please."

24 And you did so at that time. And you put them on here.
25 You autographed these lines before. I wonder if you'd just

1 write your name right in there (indicating), "Bruce Koenig,"
2 like you did before.

3 A (Indicating).

4 Q Now do you recall hearing anything in that question
5 about "Using just this area here, Mr. Koenig, could you place
6 those shots"?

7 A Well, the previous question, what we were referring to,
8 it was my understanding we were referring to the chart that
9 was on the board, which was, to my recollection, this size
10 (indicating).

11 Q All right, sir. Did you recall - do you recall
12 testifying previously that all the shots, three, four and
13 five, are in the same area?

14 A Well, it showed the same characteristics; therefore,
15 when we looked at that on this chart, this was the main
16 area they would have come from.

17 MR. GREESON: Mr. Bost and Mr. Porter, would you
18 briefly put this Government - green exhibit up on here for
19 me? That one, just like it is (indicating).

20 BY MR. GREESON:

21 Q Now do you recall when the district attorney was
22 questioning you thereafter and he asked you the question -
23 you said it was 99 percent effective. "Could it have been -
24 where else could it have been on this, that one percent, if
25 you know?" Do you recall being asked that question?

1 A Yes, sir.

2 Q And your answer was - and this is on Page 44 and 45 of
3 the state court transcript:

4 "Well, yes, sir. The only other place we could
5 find - and it was very, very doubtful it could have
6 occurred - would have been down in this area. But
7 I do not believe that occurred."

8 Do you remember giving that answer to that question?

9 A Right.

10 Q And then the district attorney said in another question -
11 and this also is on Page 45:

12 "So the one percent would be the only - the only
13 possibility would be near Number 2."

14 And you answered: "Down below it, yes."

15 Now what you were telling him was that you were leaving
16 a one percent possibility that it could be down below Number
17 2?

18 A That's correct.

19 MR. LINSIN: Your Honor, I would request that the
20 witness be permitted to explain his testimony. I believe
21 we've gotten beyond the bounds of proper impeachment here.
22 Mr. Greeson has made a gesture in referring to Government's
23 Exhibit D-10, and I think he should be requested to ask the
24 witness what the witness meant when he said, "Down below Shot
25 Number 2."

1 MR. GREESON: I think the jury knows very well what
2 he meant, if Your Honor please.

3 THE COURT: Well, I'll overrule the objection.
4 It's proper cross examination.

5 BY MR. GREESON:

6 Q Now you drew a great big area down here this morning,
7 with your finger, not with anything that would remain
8 indelible on the document; is that right?

9 A Correct.

10 Q Could you---

11 MR. GREESON: Mr. Linsin, maybe--- If I could,
12 Your Honor, maybe he misunderstood my request. I was going
13 to put that square, let him draw that square that you had him
14 draw with his finger, on another one, not this one, on the
15 one that says, "three, four and five."

16 MR. LINSIN: I did understand your request.

17 MR. GREESON: And you don't want me to draw on that
18 either?

19 MR. LINSIN: That's correct.

20 MR. GREESON: Okay.

21 BY MR. GREESON:

22 Q Well, let me ask you a question. If a shot occurred at
23 some point down around this area where I'm pointing - first
24 of all, can you give me an idea about how far that is away
25 from where the cameraman was, at the time of Shots 3, 4 and

1 5?

2 A May I use your ruler?

3 Q Certainly; please. It works on this one, too.

4 A About three hundred and fifty feet, approximately.

5 Q All right, sir. If you would, measure over to - from
6 here to the cameraman (indicating), say the mean of the area
7 that you drew on that other drawing, and tell me how far away
8 that is.

9 A About a hundred and thirty-five feet.

10 Q Now you got an echo off the back wall behind the camera-
11 man on every shot, didn't you?

12 A No, not all of them, because the cameraman wasn't always
13 located down here. Some of the shots were down the street.

14 Q Okay. Let me take that back. On all, after about
15 Number 2, the cameraman was right back to this position,
16 approximately, wasn't he?

17 A Right.

18 Q And all of those shots after one and two, you got an
19 echo off the back wall, didn't you?

20 A Correct.

21 Q Now if you got an echo from a shot way down here, how
22 long would the echo have to be?

23 A It would be hard to compute.

24 Q Well, approximately how long would it be after the
25 measurement you just made?

1 A Oh, maybe even twenty feet farther than the other way.

2 Q Which would be about three hundred and - what did you
3 say? I'm sorry.

4 A ---twenty feet, it would be.

5 Q But I didn't remember the first measurement that you
6 gave me.

7 A Oh; 350.

8 Q Fifteen?

9 A Fifty. I'm sorry.

10 Q Okay. So it would be a 370-foot echo?

11 A Yes.

12 Q Now do you still have my--- Oh, I've got that. Can you
13 tell me how many seconds after the muzzle blast that echo
14 would travel to go 370 feet?

15 A How many seconds the echo would appear after the muzzle
16 blast?

17 Q Yes, sir.

18 A .0179.

19 Q .0179?

20 A Yes, sir.

21 Q I thought you told me a while ago that a 200-foot echo
22 would travel .17.

23 A But the echo arrives after the gunshot, so you have to
24 take the differential on those two. Nothing is recorded
25 until the gunshot sound gets here.

1 Q All right, sir.

2 A So 350 feet, the camera doesn't hear anything and then
3 it hears it, and then the echo takes 20 feet longer, and the
4 echo arrives .018, approximately, seconds after the original
5 gunshot.

6 Q All right, sir. If you would, what was this distance
7 from a shot in here down to the back wall?

8 A It's at - what did we measure - 135.

9 Q And how long would an echo be, approximately, if you got
10 one off of the back wall?

11 A Oh, maybe 18 feet.

12 Q All right, sir.

13 A Additionally. Eighteen feet additionally.

14 Q All right. What would the total be?

15 A 155, 153.

16 Q All right, sir. That would look quite a bit different
17 on a transient than one that came from way down here?

18 A No, sir. The point from down there would really be 20
19 feet; coming from there it would be about 18 feet.

20 Q But you'd be able to measure the difference?

21 A But that's so close that the cameraman could have moved
22 a couple of feet.

23 Q All right, sir. You got minimal echoes off of all the
24 shots in this area that you couldn't absolutely locate?

25 A Correct.

1 Q All right. What were the length of those - what were
2 the length of those echoes? How long would those echoes take
3 to get there?

4 A Which echoes are you talking about?

5 Q We're talking about the minimal echoes you were able to
6 make. Do you have any notes with you that show any of that?

7 A Not exactly, no, sir.

8 Q You didn't bring any of your raw notes or raw data with
9 you?

10 A No, sir.

11 Q And you don't recall what the length of time was, or the
12 distance?

13 A Well, it's about - again, we're talking about coming off
14 of this back wall, whether it's slanting from down there or
15 from here. There's such little difference between here and
16 there or any place up here (indicating), that it really
17 wasn't very useful to be definitive where it came from. It's
18 not enough difference.

19 MR. GREESON: Bunky, if you would, set this down
20 just a minute, and let's go back to the drawing board.

21 MR. PORTER: Back over here?

22 MR. GREESON: Yes.

23 BY MR. GREESON:

24 Q Let me ask you to put me another transient up there, if
25 you would.

1 A Okay.

2 THE COURT: Do you want that marked for iden-
3 tification - that first sheet?

4 MR. GREESON: Well, might as well, Your Honor.

5 This will be marked as Defendants' Exhibit Number
6 3, if Your Honor please.

7 (The drawing above referred
8 (to was marked for
9 (identification as:

10 (DEFENDANTS' EXHIBIT NO. 3.

11 BY MR. GREESON:

12 Q Let me draw you a transient and you tell me - I know
13 this is going to be funny - but I saw all these transients up
14 in Washington, didn't I?

15 A Correct.

16 Q And there was some 52 of them on this one long visi-
17 corder graph?

18 A Yes, sir.

19 Q And I looked at them and some of them look very similar,
20 don't they?

21 A Yes, sir.

22 Q Even though they were very different weapons, and so
23 forth, after you made your report - you found them to be dif-
24 ferent weapons?

25 A I don't think I would agree with that statement.

Q Okay. You say that the same weapon does appear similar?

1 A No. It's the same location; they're going to appear
2 very similar.

3 Q No matter what kind of weapon?

4 A Well, both are like subsonic weapons, fired from exactly
5 the same place, so they look a lot alike.

6 Q All right. Let me see if I can give you an illustra-
7 tion. There is an irregular chatter line that runs along the
8 whole time?

9 A That's because of the people talking and---

10 Q Background noise?

11 A Yes, sir.

12 Q Right. And then when you have a gunshot, you all of a
13 sudden have something that goes (demonstrating), and if there
14 were no echoes it might look something like that?

15 A No, sir.

16 Q Well, except that my lines are not straight up like
17 yours were?

18 A These would all represent echoes. The gunshot would
19 just be that first line.

20 Q All of these would be echoes, all of the way down?

21 A Correct.

22 Q You would have one, two, three, four, five, six, seven,
23 eight, nine, ten, eleven, twelve echoes?

24 A If we ever had one that nice. We never did.

25 Q All right, sir. You draw me another transient, if you

1 would, and show me some echoes. You had--- What I saw up in
2 Washington was a big blob of lines, and every once in a while
3 a peak would come up higher than the previous peak.

4 A I know what you were looking at.

5 Q What was I looking at?

6 A Okay. I explained earlier that we ran them at different
7 speeds. We first ran them at 25 centimeters per second,
8 that's about ten inches of paper per second. We didn't quite
9 get that many, but you might get something that looks like
10 this (demonstrating). Then to make our final determination,
11 we run them at 500. Now that's 20 times more resolutions, so
12 what that looked like before when we ran it out, looks like
13 this now (demonstrating).

14 In other words, this is just expanded 20 times, so you
15 get more resolution, you pull it out wider.

16 Q Like a spring, maybe, if you pulled it out it would---

17 A That's a good analogy.

18 Q Thank you. Now are you saying that what I saw was -
19 how fast?

20 A I believe, from what you described to me - I wasn't up
21 there the whole time you were there - but it was probably 25
22 centimeters per second.

23 Q You wouldn't talk to me either, would you?

24 MR. LINSIN: Objection, Your Honor. What counsel
25 saw or did not see in Washington I don't believe is relevant

1 here.

2 THE COURT: I'll permit it to stand. Go ahead.

3 BY MR. GREESON:

4 Q Because Mr. Linsin wouldn't let you answer any of my
5 questions, isn't that right?

6 A That's correct.

7 Q All right, sir. Even though I had talked with you back
8 in 1980 about the case, all I wanted to?

9 A Correct.

10 Q Now what would be the difference in the echoes on an
11 echo that comes a long distance and an echo that comes a
12 short distance?

13 A Well, that depends. Do you mean a long distance like a
14 lot longer than the original distance from the original blast
15 to the microphone?

16 Q Yes, sir.

17 A Okay. The farther the distance, the farther it would be
18 out here. This would be an echo that went a lot longer, this
19 would be an echo that was a lot shorter.

20 Q All right. So where you would tell the difference then
21 is wherever - is where you got down to a third or a fourth
22 echo?

23 A We used all the echoes. It just depended on - like I
24 said, usually you have a close echo and some that, you know,
25 might be like this; it could be that back wall. And again,

1 as we were discussing before, sure, we could measure a couple
2 of feet difference; but then again, the microphones would be
3 just a few feet back and forth between shots, so that that
4 wasn't of sufficient - again, it was a short echo and was not
5 as much usefulness as an echo that was farther out.

6 Q And when you got minimal echoes off of every shot, you
7 were able to have some idea about whether the shot was closer
8 to the microphone or farther away from the microphone, even
9 though you could pinpoint the location?

10 A I'm sorry. Would you say that question again?

11 Q Okay. When you got down to the second or third or
12 fourth echo, whatever number of minimal echoes that you
13 had---

14 A Correct.

15 Q ---you were able to tell, with some professional cer-
16 tainty yourself, in your own mind, that it was a shot that
17 either came from a long way off or it came from a short way
18 off - to the microphone?

19 A I couldn't tell that directly. I can't look at this
20 wave form and say that gunshot came a mile away or it came
21 ten feet away. I only can tell, after doing this echo
22 analysis, where the gunshot actually came from. And then if
23 I wanted to, I could measure it from the other microphone. I
24 normally didn't do that because it wasn't particularly impor-
25 tant. But this wave form alone, looking at it - just looking

1 at it up here, I can't tell you how far away the gunshot
2 occurred.

3 Q But when you start measuring minimal echoes, you can
4 then tell; because that's exactly what you're measuring.

5 A Well, I measured the echoes to find out where the
6 gunshot occurred at.

7 Q Right.

8 A So I'm not working for what's the distance between the
9 gunshot and the microphone. I'm working to use the echo to
10 find out where the gunshot occurred. And once I---

11 Q That's right.

12 A But I don't work backwards in the sense that I'm trying
13 to say how far away is it. That kind of comes out in numbers
14 if you want that particular number.

15 Q Oh, I know that.

16 A Okay.

17 Q All I'm saying to you is, that you can tell by your
18 measurements of echoes ultimately how far away the shot was
19 from the microphone, because that's exactly what you've done
20 in 36 instances over here; exactly?

21 A Correct.

22 Q And your accuracy on those, although you express it in
23 plus or minus three feet here or plus or minus five feet
24 there, you're a hundred percent certain of the locations
25 within those parameters of those shots, aren't you?

1 A Correct.

2 Q And the only reason that you were 99 percent certain is
3 because you didn't have as many echoes on those, three, four
4 and five?

5 A Oh, you're talking about three, four and five?

6 Q Yes, sir.

7 A Correct. If I'd had a couple echoes, I certainly could
8 have matched them.

9 Q And you would have been a hundred percent sure?

10 A A hundred percent sure of all the gunshots.

11 Q Right.

12 A Okay.

13 Q But you were only 99 percent sure of those after you
14 had measured the minimal echoes that you had, and you only
15 gave one percent down the street?

16 A Well, down the street, below Gunshot Number 2.

17 Q Yes, sir.

18 A Correct, on that shorter chart.

19 Q And that was your former testimony, down below Shot
20 Number 2?

21 A Correct.

22 Q And it was - the measurement that you were able to make
23 on the minimal echoes that you had, contributed to your 99
24 percent opinion as to where they were?

25 A In actuality, I've eliminated areas I knew would have

1 echoes; and that only left certain areas where there weren't
2 any echoes.

3 Q All right, sir. You can go back to the stand and have a
4 seat now.

5 I noticed that you consulted some notebook that you had
6 with you, to refresh your recollection as to a question or
7 two the other day. Do you have that notebook with you? Can
8 I see it?

9 A Certainly.

10 Q I noticed that you obtained an aerial photograph at some
11 time, is that correct?

12 A Correct.

13 Q Did you use that?

14 A Not for the shot analysis, no, sir.

15 Q What did you use it for?

16 A Well, I think we obtained it, thinking it might be use-
17 ful to our investigation. In the end, it really didn't prove
18 to be of much use at all.

19 THE COURT: Mr. Greeson, try to stand down a little
20 bit from the witness, please.

21 MR. GREESON: I'm sorry, Your Honor. Is this okay?
22 I'm sorry.

23 THE COURT: Just so you don't block the jury's view
24 of the witness while he's testifying. All right.

25 MR. GREESON: Is that okay?

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THE COURT: That's fine. All right.

BY MR. GREESON:

Q I notice that you have a note in here from your conversation with Mr. Boyd and Mr. Sinclair, and which you testified that Mr. Sinclair told you he was "crowded next to the cameraman on his right, with microphone in hand." And that's in your handwriting, isn't it?

A Correct.

Q All right, sir. And you made that on something like January 9th, 1980?

A Yes, sir.

Q Okay. Now the cameraman's location was calculated by you, is that correct?

A Yes, sir.

Q You didn't rely on photometrics - or photogrammetrics to locate the cameraman?

A I used basic photogrammetrics just to get me approximately where he was.

Q Okay. But you did that?

A Yes.

Q Mr. Richards didn't do that, he just put cars in?

A That's correct.

Q Is that right? And did you find that that cameraman was at the right-rear corner of Vehicle Number 29?

A He was in that area, but I wasn't so interested so much

1 in the cameraman, if in fact the microphone was separate, I
2 was interested in where the microphone was actually located.

3 Q Well, you had no visual to help you locate the
4 microphone, did you?

5 A No. The process itself actually ends up locating both
6 the gunshot location and the microphone location.

7 Q You don't have to have a given point to start with?

8 A Well, that would be very nice, but you don't have to
9 have it. It just takes a lot more work when you don't have
10 it.

11 Q So you can just take a floating line and float it around
12 on there until you find both ends of it?

13 A Some of the shots were almost that bad, yes, sir.

14 Q And you had--- And that was because you didn't have an
15 anchoring point for your cameraman, is that right?

16 A Well, usually, we knew approximately where the cameraman
17 was. But at times he was moving, and we had to compute that
18 out.

19 Q Jim Waters was replacing a fuse in his video equipment
20 when the shooting began, wasn't he?

21 A I don't remember. Is that what my notes say?

22 Q Yes, sir.

23 A Okay. Yes, sir, that's what he told me.

24 Q Now the information that you were interested in getting
25 from the cameraman was their location?

1 A Location and type of equipment, anything they might be
2 able to give me that would be helpful.

3 Q Did you sit down and view their tapes with each of them?

4 A No.

5 Q So in no event - in no case did you review the tape with
6 the cameraman who took it?

7 A That's correct.

8 Q So the information they gave you was from their
9 recollection on that day, and not from a viewing of their
10 tape?

11 A That's correct.

12 Q There were some eleven separate transients between Shots
13 1 and 2, as you have them located, is that correct?

14 A Yes, sir.

15 Q Now some of those, to the untrained observer, like me,
16 look very much like gunshots; do they not?

17 A Well, we - obviously we had eleven we wanted to look at
18 in more detail for just the same reason.

19 Q And you were able to eliminate those for what reason?

20 A Various reasons. Mostly because the characteristics
21 just weren't accurately of a gunshot, when blown up were much
22 you know, this 500 centimeters per second. Before we did the
23 preliminary, we just ran the 25 and just picked out anything
24 that even looked like it might be a gunshot. And then they
25 were eliminated when we went to higher resolution graphs.

1 Q All right. Now are you saying that you selected only
2 certain transients from the tape to run at 500 centimeters a
3 second?

4 A Yes. we picked out anything that looked like it had any
5 chance it could be a gunshot; anything that was charac-
6 teristic at all, we ran.

7 Q You weren't able to identify a stick on a hood of a
8 car, for instance?

9 A I'm sorry. Identify?

10 Q Identify - if you had been asked to identify the loca-
11 tion of such a sound, even though it wasn't a gunshot, could
12 you have done it?

13 A Maybe. The problem is, the sound itself isn't loud
14 enough to produce these high level echoes. The echoes were
15 there but they might be too low in amplitude, but it's
16 possible.

17 Q When run at 500 centimeters a second, though - or is it
18 500 feet?

19 A Five hundred centimeters per second.

20 Q Chances are you would have been able to do that if some-
21 body had asked you to do it, right?

22 A If they were loud enough. I think some of them might
23 have been.

24 MR. GREESON: Your Honor, I'll be completed with
25 this in just a moment.

1 BY MR. GREESON:

2 Q All right, sir. Let me ask you--- Do you see this sec-
3 tion that I'm in now (indicating)?

4 A Yes.

5 Q Let me ask you what that is.

6 A That's a summary of the work we did; it lists which
7 transient it was, what gunshot number it was, where it was
8 located on Channels 11 and 2, the absolute time, that is the
9 time from the first gunshot, which is set at time zero, how
10 many seconds after that on Channel 11 it was.

11 Q Are these your notes?

12 A Yes.

13 Q And are these your - the procedures you went through on
14 each transient---

15 A Yes.

16 Q ---did you do a page for each transient like this?

17 A A page or two, yes, sir.

18 Q And did you have a conclusion at the bottom of each
19 transient?

20 A Well, I shouldn't say every transient; every gunshot.

21 Q So you didn't do one for every transient?

22 A No.

23 Q Just every gunshot?

24 A If it didn't meet the characteristics of a gunshot, that
25 was the end of the exam of that transient.

1 Q All right, sir. Transient Number 17 is what we were
2 open to. What gunshot number is that?

3 A Transient Number 17 on Channel 11?

4 Q Yes, sir.

5 A That would be Gunshot Number 4.

6 Q And your conclusion - if you would, just read your
7 conclusion about Number 4.

8 A "This transient at 11:55:20 on the Channel 11 videotape,
9 that's at 27.168 seconds after first recorded gunshot, is a
10 gunshot, possibly supersonic, and the muzzle blast probably
11 occurs in the vicinity of north of the intersection of
12 Everitt Street and Carver Court. No exact location could be
13 determined."

14 Q All right, sir. And that is consistent with the square -
15 it's not really a square - the five-sided figure that you
16 made and the red inside?

17 A Right, right.

18 Q And this was a--- When was this note made?

19 A When I did the exam.

20 Q Back in 1980?

21 A Yes.

22 Q And had you met Mr. Linsin then?

23 A No.

24 Q Had you met Mr. Bell then?

25 A No.

1 Q Mr. Brereton? Well, you knew Mr. Brereton then.

2 A I knew Mr. Brereton.

3 Q Or Ms. Flanagan?

4 A No, I hadn't met her.

5 Q Back before you ever talked with any of them, that was
6 your conclusion on Transient 17, Gunshot Number 4?

7 A Yes.

8 Q Let me ask you now--- I think I lost my place here.
9 Transient Number 15--- I'm sorry to stand so close here, but
10 we've both got to read off the same thing.

11 The Channel 11 microphone location on Transient Number
12 15 on Channel 11 was where?

13 A It would be within plus or minus five feet of 41.34 feet
14 west and 113.58 feet south, the southwest corner of
15 One SB apartments near northeast corner of Carver Court and
16 Everitt Street.

17 Q All right, sir. Do these notes here tell you how many
18 peaks you had on your visicorder graph that you were able to
19 measure for that shot?

20 A Well, certainly I looked at one, and obviously I would
21 have had to have at least a second one to be able to make
22 that determination.

23 Q Is that what--- I didn't get to read it all. I was
24 hoping that you could just tell me without me having to---

25 A Well, it said there was one echo there.

1 Q You only found one echo. And is that - you think that
2 was probably off the back of the building behind the
3 microphone?

4 A Yes, sir.

5 Q Since they all had one of those?

6 A Correct.

7 Q And you needed at least one more---

8 A Correct.

9 Q ---or more than one more?

10 A At least two.

11 Q You needed at least two; the one off the back and any
12 other acceptable one?

13 A Usually one off the back. Sometimes that wasn't even
14 enough; sometimes we had to get two additional. It depended
15 on the gunshot. But certainly at least two echoes were
16 necessary.

17 Q All right, sir. And if you would, just tell me what
18 conclusion you arrived at back in 1980. This is on Shot
19 Number 3, is that correct?

20 A Correct.

21 Q Transient Number 15?

22 A "Transient 11:54:28 on the Channel 11 videotape, 26.436
23 seconds after first recorded gunshot is a gunshot, unknown if
24 supersonic, and the muzzle blast probably occurs in the vici-
25 nity of north of the intersection at Everitt and Carver

1 Court. No exact location could be determined."

2 Q All right, sir. And you didn't say anything about
3 another place it could be, did you---

4 A No, sir.

5 Q ---in that conclusion? Okay.

6 Let me ask you now about Channel 11 Transient Number 18,
7 which is Gunshot Number 5. Tell me how many echoes or peaks
8 that you were able to discern on your graph.

9 A Again, the one off the - what I call the One SB
10 Building, which is the building in the southern part of that
11 graph.

12 Q All right, sir. And that's consistent also with--- Go
13 ahead and tell me what your conclusion was back in 1980,
14 about that shot.

15 A "This transient at 12:00:03 on the Channel 11 videotape,
16 31.569 seconds after the first recorded gunshot, is a
17 gunshot. Unknown if supersonic. And the muzzle blast
18 probably occurs in the vicinity of north of the intersection
19 of Everitt and Carver Court. No exact location could be
20 determined."

21 Q All right, sir. And you had no visual information to
22 aid you with either one of those three?

23 A No, sir.

24 Q There was a point--- I hope I didn't lose your place
25 now. There was a point in your grand jury testimony, I

1 believe, where you said that you had located more than 200
2 transients. Do you recall that portion of your--- Were you
3 talking about something besides transients?

4 A No. I was probably referring to transients, yes, sir.

5 Q And does that refer to the number of sounds that you
6 originally discerned on the tape that you wanted to look at?

7 MR. LINSIN: Again, Your Honor, could I ask Mr.
8 Greeson to refer counsel to a page of the grand jury
9 testimony?

10 MR. GREESON: I didn't ask him a specific question.
11 I just asked him if he testified.

12 THE COURT: Do you recall that testimony?

13 THE WITNESS: I don't remember the exact number I
14 gave, but certainly that's in the ball park.

15 BY MR. GREESON:

16 Q I'm not interested in it being exactly that many. But
17 my question is, did you discern that there were some 200
18 sounds on the original tape that you wanted to listen to more
19 carefully?

20 A Well, the two tapes, Channel 2 and 11, of which about 50
21 on each tape we decided to go into even further detail. But
22 we eliminated a lot of those, half of them, on the first time
23 through. Things that sounded like could be a gunshot, even
24 at 25 centimeters per second, were - obviously couldn't be;
25 and they were eliminated almost immediately.

1 Q Did you testify earlier this morning that if a super-
2 sonic weapon, or weapon loaded with supersonic ammunition,
3 were pointed away from the camera, that you would not get end-
4 waves?

5 A Yes, sir.

6 Q Do I understand---

7 A Technically---

8 Q ---that a---

9 A Technically, the end-wave and the muzzle blast would
10 arrive at the microphone at the same time; and they would be
11 difficult to distinguish.

12 Q All right, sir, what about--- Now that's from directly
13 behind - if the microphone were directly behind the weapon?

14 A Yes, sir. We ran a number of tests to show that.

15 Q How far out do you have to get before you--- In other
16 words, from a 90 degree angle to the left?

17 A Starting at about a 90 degree, we start seeing something
18 that you could say it's probably an end-wave. And as it got
19 closer to the front of the gun, it became extremely obvious.

20 Q And another thing that would have something to do with
21 that is whether the microphone were a shotgun microphone,
22 built - highly directional microphone, and it were pointed
23 in--- If a highly directional microphone was pointed away
24 from the muzzle blast and the muzzle blast was going the
25 opposite direction, would that be more difficult to hear an

1 end-wave, would it not?

2 A The gun is pointed at the microphone, which is pointed
3 away from the gun. Is that what you're saying?

4 Q Yes. Let's try that one.

5 A No. It would just change the phase.

6 Q What about a highly directional microphone pointed at a
7 90 degree angle to the left of the direction of the muzzle
8 blast?

9 A You would pick up some of the end-wave, yes, sir.

10 Q But if it were an omnidirectional microphone, you would
11 expect to pick up more than if it were a directional
12 microphone?

13 A The difference would be very little, as loud as these
14 sounds are.

15 Q Mr. Koenig, I believe that it's true that you don't use
16 or did not use in this case any of the physical evidence that
17 was found at the scene, or may have been found at the scene,
18 to assist you in locating gunshots.

19 A That's correct.

20 Q And that's because you don't feel that a scientific
21 method needs that. Is that an accurate way to state it?
22 In other words, you're interested in doing this scien-
23 tifically from the audio waves and you gave no attention
24 whatever to any physical evidence that was found at the
25 scene?

1 A Well, the answer is, that's correct. I needed ..
 2 information to do my tests. One was obviously the videotapes
 3 and the charts and the placement of the cars. I did not need
 4 other physical evidence to do the case. If I had needed it,
 5 I would have asked for that information; but I didn't need it
 6 to do my examination.

7 Q And the same thing applies to the testimony of witnesses
 8 or witnesses' statements; is that correct?

9 A Again, it depends. All I can talk of is in the scien-
 10 tific field. Sometimes you need supporting data from other
 11 disciplines and other times you don't. And it just - it
 12 varies case by case.

13 Q In this case you didn't use any such witness testimony
 14 or physical evidence location at all, did you?

15 A No, sir, I didn't.

16 Q In your grand jury testimony at Page 34, you were asked
 17 the same question, I believe.

18 "When you did your analysis, did you take into
 19 account the statement of any witnesses to locate
 20 the position of a shot."
 21 And your answer was: "No, I didn't. It is totally
 22 independent to any other evidence, other than what
 23 I talked about. One thing I like about forensic
 24 evidence is, you know, it should be separate from
 25 what witnesses say."

1 Do you recall giving that answer?

2 A I agree with that statement.

3 Q And in several instances in this case, you have been
4 confronted with the testimony of a witness as to any number
5 of your shots that was different from what you found, is that
6 correct?

7 A Yes, sir.

8 Q And in every one of those incidents - instances, excuse
9 me - you have been absolutely sure of the work that you did
10 and have maintained your opinion that that's where those
11 shots were; is that correct?

12 A Yes, sir.

13 Q In fact, you testified before the grand jury at Page 35,
14 did you not:

15 "And if I wasn't very very sure of what I said, I
16 wouldn't say it?"

17 A That's correct.

18 Q And that's true of all your testimony here in this case,
19 before the grand jury, in the state court trial, and every-
20 where else you've been called on - anywhere else you've been
21 called upon to give your opinion; isn't that right?

22 A Yes, sir.

23 MR. GREESON: Your Honor, I believe that's all I
24 have at this time. I may have a few more questions that I
25 would want to use the video for, and with the Court's per-

1 mission, I will let my colleagues go ahead and ask what
2 questions they have, without putting it up and taking it back
3 down.

4 THE COURT: All right. We'll take a recess now.

5 (Recess at 3:20 P.M., until 3:40 P.M.)

6 MR. PORTER: Your Honor, before the jury returns,
7 we would like to ask the Court to enforce our subpoena that
8 we served on Mr. Koenig, which was accepted by the
9 prosecution.

10 THE COURT: I'm going to quash that subpoena.

11 MR. GREESON: Without hearing anything, Judge?

12 THE COURT: Well, I read the papers. I'll hear you
13 on it if you want to be heard.

14 MR. PORTER: Your Honor, of course we've already
15 seen, I think, today in Mr. Koenig's notes, some items that
16 would have been covered by the subpoena. I'm sure it would
17 have benefited us to have had a chance to look at those
18 before Mr. Greeson examined him. But the important thing to
19 us are the visicorder graph forms.

20 We went up to Washington and saw those and spent a
21 lot of the government's money and a lot of our time and
22 Mr. Koenig's time, and we'd like to use those in cross
23 examining him, and we can't because they're not here.

24 THE COURT: Well, I'm going to quash the subpoena.
25 All right.

1 All right. bring them in.

2 (Jury in at 3:45 P.M.)

3 BY MR. PORTER:

4 Q Agent Koenig, other than in this matter, how many cases
5 did you testify for the defense in?

6 A Seven or eight.

7 Q Seven or eight. Did any of those cases involve the
8 location of various gunshots?

9 A I don't think so. No, sir.

10 Q In how many cases have you been asked to locate gunshots
11 of more than two persons?

12 A Where more than two people were firing?

13 Q More than two persons, supposedly, firing.

14 A Not that many. Maybe a dozen times.

15 Q And in those cases the question has been the location of
16 the gunshots?

17 A The location, to determine whether the gunshots were
18 actually fired or not, what was gunshots and what wasn't.

19 Q And they involved more than two persons. Your conclu-
20 sion was that more than two persons were firing in this case?

21 A Well, that's not the exact question you asked.

22 Q I understand.

23 A In a number of cases we got, people came in and said,
24 "Gee, there was 50 people firing," and we discovered that
25 there was only two, for instance; or, "Gee, there was

1 hundreds of gunshots," and there was, you know, ten.
2 Certainly even when President Reagan was shot at, there was
3 accusations of other shooters.

4 Q Yes, sir.

5 A And that wasn't true; there was only one shooter. But,
6 you know, the accusation, when it came to us, we didn't know.

7 Q Have you ever worked on a case where you did conclude
8 that there were more than two persons firing, other than this
9 case?

10 A Two cases that I can remember.

11 Q Could you tell me very briefly what was involved in
12 those?

13 A Both cases have not come to court yet. They involve
14 terrorist activities where there was multiple people firing
15 at a number of police officers.

16 Q And that's about all you can say about those because
17 they have not gone to court yet, is that right?

18 A That's correct.

19 Q Now in the Kennedy assassination matter, did you have to
20 run visicorder graphs in that matter?

21 A No, sir.

22 Q And I believe you indicated you had reviewed some voice
23 tapes in the ABSCAM cases?

24 A I did quite a bit of work on ABSCAM of various types -
25 determining whether tapes were altered, making them more

1 understandable, things like that.

2 Q Those tapes involved voices as opposed to supposed
3 gunshots?

4 A Well, authenticity exams, you're looking for non-voice
5 information that might reflect that the tape has been
6 altered.

7 Q Yes. They didn't involve gunshots?

8 A No, sir.

9 Q Okay. And did you review any tapes in the COLCOR
10 investigation?

11 A No, sir.

12 Q Could you give me the name and model number of the visi-
13 corder that you used in this case?

14 A I used two visicorders. They're both Honeywell. The
15 dual channel was an optical - Honeywell optical, dual-channel
16 visicorder, Model 2112; and the single channel was a
17 Honeywell 8106A.

18 Q Is "visicorder" also a brand name?

19 A I've never heard it. It's just a type of equipment.
20 It's very standard equipment.

21 Q Companies other than Honeywell call their machines
22 "visicorders"?

23 A Yes, sir. There aren't many companies that make these
24 machines.

25 Q Could Honeywell perhaps be the only company that makes

1 those?

2 A No, sir.

3 Q There are others?

4 A Correct.

5 Q Do you know what the width of your trace beam was on
6 those two visicorders, and could you explain what a trace
7 beam is?

8 A Yes. It's like an oscilloscope, if you've ever seen
9 one, with the beams going back and forth - just how far the
10 light goes across it. They have approximately four and half
11 to five-inch trace widths.

12 Q I'm sorry?

13 A Four and a half to five-inch usable trace widths.

14 Q How - when the visicorder prints out a form on a
15 graph---

16 A Right.

17 Q ---how wide is the line that it prints?

18 A Oh. It kind of depends on how you adjust it. It's
19 quite narrow. I've never measured it exactly.

20 Q Oh; it can be adjusted to be wider or narrower?

21 A Yeah. Sometimes when you have a lot of garbage in the
22 background, you make it a little bit wider, just so that kind
23 of prints out just a little bit smooth.

24 Q Do you recall what the width was you used in this case?

25 A I don't think we ever measured. It's quite narrow.

1 Q Can you approximate?

2 A Less than a sixteenth of an inch.

3 Q Did you ever have an opportunity to see the microphones,
4 cameras, or recorders used at the scene in this case?

5 A No, sir.

6 Q Did you ever run any portion of Channel 12 on a visi-
7 corder machine?

8 A I don't think so, but let me check. No, sir, I have no
9 record of running Channel 12 at all.

10 Q Now when you made an audio copy off of the original
11 tapes of, I believe, Channels 2 and 11 in this case, did you
12 use a high-speed recorder in that instance?

13 A No, sir.

14 Q The recorder was run at the same speed as the tapes?

15 A Yes, sir.

16 Q Of the videotapes?

17 A We'd never make a copy on a high-speed unit.

18 Q Can you tell me the timing code of the signal that you
19 used on the visigraph - visicorder graphs?

20 A You mean the IRIG "B"?

21 Q Yes, sir. Is there something, millisecond, milli-inches
22 per second, or anything like that?

23 A It's really a very complicated wave form that will -
24 where the reader can tell you what the time is, and we used
25 just a wave form for accuracy. IRIG "B" is the most common

1 time code, which is heavily used in this country.

2 Q It has a standard time code and from that---

3 A Yes.

4 Q ---you know what speed the code is?

5 A Yes. It's a very, very common - you know, everybody
6 uses it in the field.

7 Q Do you know what that speed is?

8 A Well, it's not a speed. IRIG is a time code relating to
9 usually seconds, minutes and hours. Police departments use
10 them on most of their logging units because the tapes, the
11 big tapes, run like 24 hours; and if they want to find
12 something at, you know, 7:35, they can run the thing forward
13 and the time code will read it right out for them and allow
14 them to find that place in the tape very quickly. In fact,
15 they have automatic readers. If you just punch it in, it
16 will go right to that place.

17 Q Read it in. If you had been at the scene on this case,
18 could you have stood in a location and determined from which
19 direction the shots were fired, or would the echoes have got-
20 ten in your way at some point?

21 A I'm sorry; I don't understand the question.

22 Q Assuming you were a person at the scene in this case---

23 A Yes, sir.

24 Q ---could a person standing there, listening and hearing
25 what he thought were gunshots, determine the direction, for

1 instance, to look in? Say they were fired over there
2 somewhere. Would the echoes sometimes cause the person to
3 incorrectly determine from where they were fired?

4 A I think the answer is yes to both of those. Sometimes
5 you can be very accurate, but if somebody shoots over there
6 in that part of the courtroom and he's blocked by something,
7 and the echo comes off very strongly off the back wall, you
8 might mistakenly think the gunshot came from the back wall.

9 MR. PORTER: Mr. Greeson, could you help me carry
10 D-5 out here just a minute?

11 MR. GREESON: Yes, sir.

12 BY MR. PORTER:

13 Q Mr. Koenig, I have put Government's Exhibit D-5 on the
14 easel here. Did you have anything to do with putting the
15 gray lines on here?

16 A No, sir. I had nothing to do with that chart at all,
17 other than to check the accuracy of it.

18 Q Yes, sir. Did you have anything to do with the
19 groupings of shots down here at the bottom, with a certain
20 number of seconds it took for shots to be fired?

21 A No, sir.

22 Q I believe you mentioned possibly on Friday that on the
23 Channel 11 tape there was a transient very early on in the
24 incident that you initially thought may have been a shot.
25 Could you tell me which transient that was?

1 A Well, there was a - Gunshot Number 1 was Transient
2 Number 2 on Channel 11, so obviously there was one transient
3 before that.

4 Q There was just one transient before, which you deter-
5 mined was Shot Number 1?

6 A Correct.

7 Q And it was that transient that you initially thought
8 perhaps could have been a shot?

9 A Well, again, at the low resolution, it was just not
10 possible to tell.

11 Q Now did you make the orange stickers that have been used
12 to locate shots on the various charts we've seen and on the
13 model?

14 A No, sir.

15 Q Did you prescribe a certain size for those stickers?

16 A No, sir.

17 Q Do you know who determined the size of the stickers?

18 A I presume the government attorneys, but I don't know for
19 sure.

20 Q Now in performing your analysis and using the echoes to
21 locate shots on the map, did you ever have to worry about the
22 angle at which a building was sitting? I don't mean one that
23 is completely at an obtuse angle to the street; but for
24 instance if the recreation building was not strictly parallel
25 with the street, did you have to consider that?

1 A Yes, sir.

2 Q You never looked at the surveyor's notes in this matter,
3 did you - from which the maps were made?

4 A No, sir.

5 Q Do you know at all whether the surveyors indicated the
6 angle of the buildings in relation to the street?

7 A When we did our examination, again, I talked about the
8 billiard shot, where if you hit at a certain angle, it had to
9 come off at a certain angle. We measured the building,
10 wherever it sat, and made sure those angles were correct. So
11 it really didn't matter to us, as long as the surveyor was
12 correct in where his building was. And if he was off any
13 amount at all, things wouldn't match, so we didn't expect to
14 see gross errors at the scene.

15 MR. PORTER: Your Honor, if I may have just a
16 minute.

17 THE COURT: All right.

18 BY MR. PORTER:

19 Q Agent Koenig, did you use a computer at all, to use the
20 echoes to locate shots?

21 A We used a computer, several computers in our lab. But
22 in the end we didn't use that information to make a final
23 determination. We did some preliminary modeling of things
24 with the computer; it was a lot easier on the computer.

25 Q It's a lot easier on the computer?

1 A Right, to do the modeling. But to actually do the
2 examination, to match everything up, we found the computer to
3 be slower. It was taking us so long to program in what we
4 wanted it to do. It would have taken forever to get the
5 programming done; and we could do it by hand, even though it
6 was tedious, quicker.

7 Q Are you saying it was faster to use a trial and error
8 method by hand to match up angles and distances than it was
9 to use a computer?

10 A Yes, because of the program. If we continued to have
11 exams exactly like this, it would have been worthwhile to
12 do the program. But the odds of having a case exactly like
13 this again are relatively remote, so therefore it wasn't
14 worth programming it.

15 Q Now there is some difference between the space of time
16 of certain shots on Channel 2 than with the same shots on
17 Channel 11, isn't there?

18 A You mean compared to each other?

19 Q Yes, sir.

20 A Yes, sir. There should be.

21 Q There should be a difference?

22 A Yes, sir.

23 Q Tell me why.

24 A Okay. We have two cameramen standing fairly close to
25 each other. And what happens is, let's say they're standing

1 five feet apart, and the gunshot comes from a direction and
2 it ends up - it gets to one cameraman five feet ahead of the
3 other one. Well, that one should be about - ends up about
4 five-thousandths of a second off. And when we matched them
5 up, I think the widest we ever got here--- Comparing - most
6 of them were only like - less than four milliseconds
7 difference; and the most we ever got up to was nine millise-
8 conds difference. Which meant the cameramen were about nine,
9 ten feet apart, which we know they did move around.

10 So if they'd matched up perfectly, it would have meant
11 the microphones would have to be at the exact same position,
12 and we know that's virtually impossible. They'd have to be
13 at least a few feet away.

14 Q You're familiar with the term "spectral composition"?

15 A Yes, sir.

16 Q Can you tell me what that means?

17 A A lot of our work, not in this area so much, but in
18 voice information, one of the problems we have to relate to
19 is what is voice information, what is music, what is noise.
20 We've got to find some way to differentiate, and we do that
21 with the frequency they make. Frequencies relate to very low
22 sounds. Your low frequency will go (demonstrating). A
23 soprano would be a very high frequency. Okay. Somebody
24 hitting a triangle would be very high, and somebody playing,
25 you know, an oboe would be very low. Okay.

1 We can look on a graph, and it's called FFT, and you can
2 actually see these various components of the voice, in
3 music, and everything else. And you can develop experience
4 in time to be able to look at these different classifica-
5 tions. Okay.

6 You can't use that with gunshots, because transient
7 sounds I define as a very short duration sound. But in my
8 physics classes in college they often defined it as an
9 impulse containing all frequencies. So if you look at a
10 gunshot in the frequency domain, it just looks flat;
11 everything is about the same. So it's not a very good way of
12 graphically showing transient-type sounds.

13 Q And isn't it an analysis of the amount of energy
14 involved somehow in the sound wave? Is that correct?

15 A Energy in particular frequencies, yes; frequency com-
16 ponents. You know, for instance, if you look at a telephone,
17 somebody talking on the telephone, those telephones only go
18 out to about 3,000 cycles per second. So if you looked at
19 the frequency domain of that, there would be a roll-off
20 around 3,000. There wouldn't be much information beyond
21 that.

22 But if you recorded a symphony orchestra, it could go
23 out 20,000 plus, so it really - it shows you how high the
24 tones can go.

25 So if you listen to your radio at home, or stereo, and

1 it sounds like it's not very - I think the word you're
2 looking for is "bright," it has no high frequencies in it,
3 then a frequency domain characteristic would show no infor-
4 mation or no energy in the high frequencies, and lots of
5 energy in the low frequencies.

6 Q Could you use an analysis like that, for instance, to
7 determine the presence or absence of an end-wave when you
8 couldn't determine it visually on these graphs?

9 A Absolutely not. That would - that would be--- If some-
10 body made a comment like that to us, we would understand the
11 person didn't know how to do this exam. Because again,
12 transient sounds produce all frequencies. So if you looked
13 at the frequency characteristics, all you're looking at is
14 the limiting characteristics of the microphone and the tape
15 recorder. Because the gunshot or the end-wave is going to
16 have all frequencies. So it's just - you're saying how good
17 did the system record it, how many of the high frequencies
18 and low frequencies could it record? So it would be useless.

19 Q Now in determining what is and what isn't a gunshot, or
20 in this case determining what is - what was or wasn't a
21 gunshot, I believe you indicated one criteria is the
22 quickness of the rise in the amplitude?

23 A Yes, sir.

24 Q Can you tell me in milliseconds - if that's a term of
25 time you used in doing this - how great an amount of time of

1 milliseonds you would consider might still be a gunshot?

2 A We considered anything as most likely a gunshot if
3 the rise time was at the limits of our equipment. In other
4 words, the equipment limits how fast it went up, not the
5 actual sound. Every other sound couldn't - our equipment
6 could resolve better than the sound. With gunshots it was
7 just the opposite. The gunshot rose so quickly that our
8 equipment was at the limit of our equipment to rise that
9 quickly.

10 Q Are you saying that the equipment possibly couldn't even
11 catch the whole rise?

12 A Correct.

13 MR. PORTER: That's all the questions I have, Your
14 Honor.

15 THE COURT: All right.

16 MR. BOST: This is Exhibit D-10j.

17 BY MR. BOST:

18 Q Mr. Koenig, did you place the dots representing the
19 shots on this exhibit?

20 A Yes, sir, I did.

21 Q What is the scale of this particular exhibit?

22 A I can't honestly read it from this far.

23 Q Five thirty-seconds equals one foot?

24 A Yes, I think it says approximately one foot, yes, sir.

25 Q Now when you placed these dots representing the shots on

1 this chart, they're not drawn to scale based on your conclu-
2 sions, are they?

3 A I don't understand the question exactly.

4 Q Do you have your conclusions with you about---

5 A Yes, sir.

6 Q ---where each of these shots was found and the size of
7 the shot?

8 A The size of the shot?

9 Q Or the area from which the shots could come?

10 A Well, the dots were placed accurately, but it didn't
11 show the whole error range. Is that the question you're
12 asking?

13 Q That's exactly what I mean. The dot is placed
14 accurately, but the shot actually could have come from
15 another area, not necessarily where this dot is; is that
16 correct?

17 A Most of them are like plus or minus three feet or so.

18 Q Okay. Have you got your notes with you?

19 A Yes, sir.

20 Q With regard to Shot Number 1, I believe your conclusion
21 indicates that the shot was located at 192 feet, point 32,
22 within plus or minus ten feet in the east/west direction.
23 Now that would mean, would it not, that you could go ten feet
24 this way (demonstrating) from that point, and ten feet this
25 way, in the west direction, and the shot could have been

1 within those parameters; is that correct?

2 A That's correct.

3 Q And you also said that at six or seven point forty-two
4 feet south, plus or minus three feet; so you could go three
5 feet this way, or three feet that way?

6 A Correct.

7 Q So you've got an ellipse, and within that ellipse that
8 shot could have been fired; is that correct?

9 A We have a rectangle.

10 Q You have a rectangle?

11 A Yes, sir.

12 Q Okay. Why don't you have an ellipse?

13 A Because I didn't define it that way.

14 Q But anyway, you've got a distance - an area some
15 distance on this side and some distance on this side, and an
16 area some distance on either side that that shot could have
17 come from?

18 A Yeah. I think on that scale it would be, what, a little
19 over an inch or so each - east/west and---

20 Q Well, let's see if we can compute that. If you've got
21 plus or minus ten feet in the east/west direction, you're
22 talking about 20 feet, aren't you?

23 A Total, yes, sir.

24 Q Okay. And if you've got a scale of five thirty-
25 seconds equals one foot, then 20 feet would be 20 times

1 five thirty-seconds, wouldn't it?

2 A Correct.

3 C And that would be three and an eighth inches, wouldn't
4 it?

5 A Yes.

6 Q So you could have an area three and an eighth inches in
7 the east/west direction that that shot could have come from?

8 A Correct.

9 Q Okay. And what would it be if it's plus or minus three
10 feet?

11 A That would be about an inch across.

12 Q Fifteen-sixteenths, does that sound accurate?

13 A That's about it, yes, sir.

14 Q Okay. I have some little figures here that we have pro-
15 duced, Mr. Koenig, and I want you to measure them. And if
16 you would, please, step down here. I just want the jury to
17 see what the area would look like if it were accurately
18 reflected on this diagram.

19 MR. BOST: And these will come off, Mr. Linsin, if
20 you don't mind if we use these to show them, and then we'll
21 take them right back off.

22 MR. LINSIN: Your Honor, we would object at this
23 point to the addition of any of these to the exhibit. The
24 witness's testimony can certainly be clearly made for the
25 purposes of the record and for the purposes of the jury.

1 THE COURT: Well, if counsel wants to put on some
2 little markers, which he says can be taken off---

3 MR. BOST: Your Honor, they'll come right back off,
4 and I just want to show the jury what the actual area would
5 be if these were accurate.

6 THE COURT: You may do that. Go ahead.

7 MR. BOST: Thank you.

8 MR. GREESON: Fraley, would you want to put this
9 overlay, that we have on our other exhibit, over it so we can
10 preserve them?

11 MR. BOST: Sure. That might be a better idea.
12 We'll just put that right over it.

13 BY MR. BOST:

14 Q Mr. Koenig, you just said that the first shot was three
15 and an eighths inches by fifteen-sixteenths. Now I've got
16 more of an ellipse here, and you can explain to the jury if
17 it's square, but I'd like you to just measure the length and
18 width and see if it's approximately three and an eighths
19 inches by fifteen-sixteenths.

20 A Yes, approximately.

21 Q Okay. If you would just take that off and place it over
22 Shot Number 1 to show what the general size of the area from
23 which that shot could have come.

24 Okay. Now with your second shot, I believe your
25 conclusion was that that was within plus or minus ten feet in

1 the east/west direction and plus or minus five feet in the
2 north/south direction, and I've computed this and you can
3 follow my computations and see if I'm correct, but plus or
4 minus ten feet, plus or minus five feet, is twenty feet by
5 ten feet?

6 A Okay.

7 Q And computing that on this scale, I got three and an
8 eighth inches by one and nine-sixteenth inches.

9 A Sounds correct.

10 Q Okay. If you would just---

11 A I don't think there's any---

12 Q Okay. We'll, just hold that. I'll get Mr. Porter to
13 hold that down there and just - we'll go over that one,
14 overlay that one briefly.

15 Okay. And that generally shows the size of the area,
16 except you said it would be a rectangle, but that's generally
17 the length and the width of the area---

18 A Yes, sir.

19 Q ---from which the shot might come? Okay.

20 We'll proceed here to Shot Number 6. Shot Number 6
21 we've got a plus or minus five feet and plus or minus three
22 feet. And computing that on out, it's one and nine-
23 sixteenths by fifteen-sixteenths. Now let's see if we can
24 find that. Here's Shot Number 6 (indicating). Number 6.

25 A I know. Make sure I got the ellipse in the right direc-

1 tion.

2 Q Okay. And Number 7 is the same size, so I'll just have
3 you peel that one---

4 A Okay.

5 Q ---right on off. Okay. And we can do the same for
6 Number 9 or Number 8.

7 A Okay. I need longer fingernails.

8 Q Those stick on there pretty tight.

9 Okay. And I think Number 9 is again the same size as
10 the previous ones.

11 And Number 10 is again the same size.

12 Okay. Now Number 11 varies a little bit, and that's
13 plus or minus five feet in each direction, which I calculate
14 to be one and nine-sixteenths by one and nine-sixteenths.

15 A Uh-huh.

16 Q Okay. And that was Number---

17 And Number 12 again is five feet in either direction,
18 and I believe we've got a different color for that one.

19 MR. LINSIN: What were the dimensions for the
20 sticker on Number 12, Mr. Bost?

21 MR. BOST: Plus or minus five feet.

22 MR. LINSIN: The measurements of your sticker,
23 however, that you just placed on here, what are the measure-
24 ments of that?

25 MR. BOST: Plus or minus five feet in both

1 directions.

2 MR. LINSIN: In inches, Mr. Bost? What is the
3 measurement here?

4 MR. BOST: Oh, I'm sorry. That is one and nine-
5 sixteenths inch by one and nine-sixteenths inch.

6 BY MR. BOST:

7 Q Okay. We're to Number 13. Okay, that's plus or minus
8 three feet, which I calculate to be fifteen-sixteenths by
9 fifteen-sixteenths.

10 A Thirteen may not stay on.

11 Q Okay. We'll remove that before long anyway.

12 Number 14 is plus or minus five feet, which calculates
13 to be one and nine-sixteenths inch by one and nine-sixteenths
14 inch.

15 Fifteen, plus or minus three feet, which equates to fif-
16 teen-sixteenths by fifteen-sixteenths.

17 MR. LINSIN: Your Honor, may I - through the Court,
18 may I inquire of Mr. Bost whether he is referring to fifteen-
19 sixteenths or fifteen-thirty-seconds?

20 MR. BOST: It's thirty-thirty-seconds, which redu-
21 ces to fifteen-sixteenths.

22 MR. LINSIN: I believe you indicated it was plus or
23 minus three feet?

24 MR. BOST: Which is six feet, which comes out to
25 six times five is thirty-thirty-seconds, which reduces to

1 fifteen-sixteenths.

2 MR. LINSIN: All right.

3 BY MR. BOST:

4 Q Okay, we are up to--- Which one was that you placed?

5 A Fifteen.

6 Q Okay. Number 16 is plus or minus five feet, which
7 equates to one and nine-sixteenths by one and nine-
8 sixteenths.

9 Number 17 again is plus or minus five feet, which
10 equates to one and nine-sixteenths by one and nine-
11 sixteenths inch. That's kind of dark there.

12 A Yes.

13 Q Eighteen, plus or minus five feet, which equates to one
14 and nine-sixteenths inch by one and nine-sixteenths inch.

15 Number 19 is plus or minus three feet, which equals
16 fifteen-sixteenths by fifteen-sixteenths.

17 Number 20 is plus or minus three feet, fifteen-
18 sixteenths by fifteen-sixteenths.

19 Number 21 is plus or minus three feet in the east/west
20 direction by plus or minus seven feet in the north/south
21 direction, which equates according to my calculations to
22 fifteen-sixteenths by two and three-sixteenths.

23 Okay. Twenty-two is plus or minus three feet, which
24 equates to fifteen-sixteenths by fifteen-sixteenths.

25 Twenty-three, plus or minus three feet, which equates to

1 fifteen-sixteenths by fifteen-sixteenths.

2 Twenty-four, which is plus or minus three feet in the
3 east/west direction by plus or minus five feet in the
4 north/south direction, which is fifteen-sixteenths by one and
5 nine-sixteenths.

6 Twenty-five is plus or minus three feet, which equates
7 to fifteen-sixteenths inch by fifteen-sixteenths inch, and
8 that's a red one.

9 THE WITNESS: May I loosen this?

10 MR. PORTER: Sure.

11 BY MR. BOST:

12 Q Twenty-six, Mr. Koenig, is plus or minus three feet,
13 fifteen-sixteenths by fifteen-sixteenths.

14 Twenty-seven, again plus or minus three feet, fifteen-
15 sixteenths by fifteen-sixteenths inches.

16 Twenty-eight, plus or minus three feet, which equates to
17 fifteen-sixteenths inches by fifteen-sixteenths inches.

18 Twenty-nine is plus or minus three feet in the east/west
19 direction by plus or minus five feet in the north/south
20 direction, which equates to fifteen-sixteenths inches by one
21 and nine-sixteenths inches.

22 Again, 30 is the same dimension, three feet east/west by
23 five feet north/south, which equates to fifteen-sixteenths by
24 one and nine-sixteenths.

25 Number thirty-one, plus or minus three feet, which is

1 fifteen sixteenths by fifteen sixteenths.

2 Thirty-two, plus or minus three feet east/west by plus
3 or minus five feet north/south, which equates to fifteen-
4 sixteenths by one and nine sixteenths.

5 Thirty-three, plus or minus seven feet east/west by plus
6 or minus three feet north/south, which equals two and three-
7 sixteenths inches by fifteen-sixteenths inches.

8 Number 34 is plus or minus three feet east/west by plus
9 or minus five feet north/south, fifteen-sixteenths by one and
10 nine-sixteenths. That ought to be blue.

11 Number 35, plus or minus five feet, one and nine-
12 sixteenths inches by one and nine-sixteenths inches. That
13 should be red.

14 Thirty-six on the blue, plus or minus three feet
15 east/west by plus or minus five feet north/south, fifteen-
16 sixteenths by one and nine-sixteenths.

17 Thirty-seven, plus or minus three feet east/west by plus
18 or minus five feet north/south, which is fifteen-sixteenths
19 by one and nine-sixteenths.

20 Okay, 38, Mr. Koenig, you did not compute an error
21 rate, so I'll just leave that as it is.

22 Number 39, the last one, is plus or minus seven feet
23 east/west by plus or minus three feet north/south, which
24 equates to two and three-sixteenths inches by fifteen-
25 sixteenths inches.

1 Thank you, Mr. Koenig, you can have a seat.

2 A Thank you.

3 MR. LINSIN: Your Honor, may I - just for the pur-
4 poses of the record, Your Honor, I would just like to make
5 clear that Mr. Bost has transferred what had been marked as
6 Defendants' Exhibit Number 2 to Government's Exhibit D-10 and
7 in the process of doing so, Your Honor, I just wanted the
8 record to be clear that the rectangular area which Mr. Koenig
9 had drawn earlier on the previous chart, Defendants' Number 1
10 is now grossly distorted by having been raised a large number
11 of feet, as it appears on this diagram. And I just wanted to
12 make that clear for the record with the overlay as it now
13 sits.

14 THE COURT: All right.

15 MR. GREESON: Actually, Mr. Greeson did that.

16 BY MR. BOST:

17 Q Mr. Koenig, what you have done now, by placing these
18 areas on the map, is to more accurately reflect the area from
19 where any of the shots had come, is that correct?

20 A Can I explain that?

21 Q Well, if you'll answer the question, certainly you can
22 explain it.

23 A I think the answer is, not necessarily. What is shown on
24 there is the maximum possible error rate. Where everything
25 possibly goes in the wrong direction, in other words, it

1 couldn't exceed what I have there; but is most likely, you
2 know, one-tenth that size, most of them.

3 Q But these are your conclusions?

4 A Oh, absolutely.

5 Q What you have up here are your conclusions?

6 A Right. But they're maximum error rates, not probable
7 error rates.

8 Q Well, that's what a scientist is going to do, right?

9 A Correct.

10 Q All right. So what you've got here is the area from
11 which, in your opinion, the shots could have come using maxi-
12 mum error rates?

13 A Correct.

14 Q Mr. Koenig, did you determine, using the Channel 8
15 videotape, when shots were fired on that tape?

16 A No, sir.

17 Q Did you use any tape other than Channel 11 to make those
18 determinations?

19 A And Channel 2.

20 Q But we can't see all the shots on Channel 2, is that
21 correct?

22 A All but - the first shot is not on Channel 2, the rest of
23 them are.

24 MR. BOST: Your Honor, at some point I would like
25 to use Channel 11 to go over some of Mr. Koenig's testimony.

1 It might be more appropriate to let some of the other defen-
2 dants ask questions before we proceed there, but I'll be glad
3 to proceed either way.

4 THE COURT: All right. We'll follow your method.
5 Do any of the other--- Do you want to defer to the others
6 now, before you---

7 MR. BOST: Yes, sir. I'll be glad to do that, so
8 we won't use all the time going back and forth between the
9 tapes.

10 THE COURT: All right. Do you have anything,
11 Mr. Harwell?

12 MR. HARWELL: I have no questions of this witness,
13 Your Honor.

14 THE COURT: All right. We'll just go down the line.
15 Mr. Keith, do you have anything?

16 MR. KEITH: Yes, sir.

17 BY MR. KEITH:

18 Q You stated earlier that you yourself put the dots on this
19 diagram?

20 A Yes, sir.

21 Q And you used a T-square, is that correct?

22 A I had a T-square and a ruler to mark it, yes, sir.

23 Q And do you have a go-by or something to establish this?

24 A Excuse me?

25 Q Do you have a go-by to establish these locations?

1 A I'm sorry. I don't---

2 Q Did you compute from your notes how many inches north and
3 south, east and west, these points had to be moved around to
4 be located accurately?

5 A To match the scale of the drawing; yes, sir.

6 Q And how accurate are the locations that you have on
7 D-10?

8 A I would guess within an eighth of an inch or so.

9 Q How much would that compute to in feet, based on this
10 scale?

11 A I meant an eighth of an inch on that scale; I mean, on
12 that map it's within an eighth of an inch - the center of the
13 sticker is within an eighth of an inch.

14 Q So you - on the other map over there, the three-
15 dimensional diagram which - the real big one over there, I
16 don't know the D-number, but - D-12, I'm told - did you also
17 put the stickers on that?

18 A Yes, sir.

19 Q And how did you establish the location of those figures?

20 A Again, I measured them out.

21 Q Did you use the same notes that you used when you pre-
22 pared D-10?

23 A Well, it was a different scale, I believe, but the same
24 notes to get both of them; yes, sir.

25 Q All right. The different scale, what would be your

1 error on the big - I don't know; we'll call that one the ten-
2 thousand-dollar exhibit and this the two-thousand dollar -
3 what's your error over on the ten-thousand dollar exhibit?

4 MR. LINSIN: Your Honor, I object and I move to
5 strike that comment.

6 THE COURT: Yes. Just refer to them by the exhibit
7 numbers.

8 MR. KEITH: What's the big one?

9 MR. LINSIN: D-12.

10 BY MR. KEITH:

11 Q D-12, what's the error rate on that one?

12 A I would guess my ability to put that sticker down is
13 probably within an eighth of an inch. I could measure it out
14 virtually right on, but it's - my big fingers get in the way
15 sometimes, so it's within an eighth of an inch.

16 Q Did you in fact measure it out?

17 A Yes, sir.

18 Q You just didn't go up there like you-all did now and pop
19 them on, did you?

20 A No, sir. It took me all day to do this exhibit and the
21 other exhibit.

22 Q A half a day for each, approximately?

23 A Approximately, I guess.

24 Q Would you come down here a minute, please, sir?

25 Would you come over here to the big D-12?

1 THE COURT: Well, the jury can't see it from there.

2 MR. KEITH: Maybe I can do this orally, without
3 wasting a lot of time, Your Honor.

4 THE COURT: Well, let's try it; go ahead.

5 BY MR. KEITH:

6 Q Will you look at this grouping up here by the 14, 12---

7 THE COURT: I'm afraid that's going to be
8 impossible. The jury doesn't know what you're talking about.

9 MR. BOST: We'll help him move it.

10 THE COURT: Better move that.

11 MR. KEITH: For your records, Your Honor, we're flipping
12 up the plastic overlay - let's turn it up - D-2, Defendants'
13 Exhibit 2.

14 BY MR. KEITH:

15 Q And I'll call your attention to the grouping up here of
16 12, 14, 17, 18, and 16.

17 A Yes, sir.

18 Q Are they in accurate position?

19 A Accurate as possible with stickers.

20 Q All right. Now I call your attention to the grouping on
21 the three-dimensional diagram.

22 THE COURT: Can all the jurors see that?

23 Let some of the jurors on this end move up so they
24 can see. Just feel free to move up if you can't see.

25 BY MR. KEITH:

1 Q All right. Is there any difference between the grouping
2 here and the accuracy of the placement in the grouping here
3 (indicating)?

4 A Oh, yes, sir. This is a much larger scale, which allowed
5 me to be more accurate. Many of the shots were right on -
6 almost exactly the same place. If I put them in the exact
7 same place, you'd have stickers on top of stickers, so I just
8 put them as close as I could so that you could still read the
9 numbers. Here, the scale is appreciably larger on this map.
10 You see how much wider the road is compared to here
11 (indicating)? This way it gave me more room to get the
12 stickers on. Even here I can't put them on top of each
13 other, even if the gunshots occurred at the same place.

14 Q So to make this accurate between this model and this
15 model, you should have used bigger stickers to show the rela-
16 tive position between here and the other model, the flat
17 model?

18 A Well, this is as accurate as I could get with this size
19 sticker. Obviously I could do it if I had even a bigger map,
20 you know, a bigger model. I could spread them out some more.
21 This is the same size sticker on a totally different scale
22 map.

23 Q This cluster over by the Recreation/Administration
24 Building on the D-10, is that in the same relative position
25 as what you have here (indicating)?

1 A Correct. But, see, I could spread it out; like 21, I
2 had enough room to put 21 separate. Here they were so
3 crowded together because the shots were occurring at vir-
4 tually the same place, and I had no room to put it.

5 Q Mr. Koenig, it looks like there's a whole lot of - in
6 fact, there's about a thumb's difference between 21 and 37
7 here, and the rest of them are on each other, just like they
8 are here, but 21 is all jammed in there.

9 A Well, not really. See, 36 and 37 are in this group
10 here, and they couldn't fit in there. I could have put them
11 down at the bottom and, see, 21 would have sat by itself,
12 just - according to how you place them. See, most of these
13 shots are just about in the same place.

14 Q Are they the same respectively to this (indicating)?

15 A Yes. It's just that I can't put the stickers any closer
16 to each other.

17 Q If you measured out from 21 to the center of 36, do you
18 know what that distance would be?

19 A Twenty - thirty-six would probably be about where 32 is.

20 Q Oh, so---

21 A There's nowhere I could put it.

22 Q ---this is wrong? D-10?

23 A Well, there's no way I can get it closer.

24 Q Is it wrong? Yes or no.

25 A Wrong? That's as close as I could put the stickers.

1 Q Is it wrong?

2 A Wrong in what way?

3 Q You're the one that says it's supposed to be down lower
4 an inch here.

5 A That was the most accurate way I could put that sticker
6 on there.

7 Q That's just a rough approximation of where those
8 gunshots came from?

9 A A rough approximation. Some are dead on and some are as
10 I could get them, that's correct.

11 Q As close as you could get them means as close as what on
12 this particular---

13 A As close as I can get that sticker.

14 Q Well, how far in feet is that?

15 A Well, it could be, you know, a half an inch off.

16 Q Which would be how many feet on the scale of whatever
17 this map is here - D-10?

18 A It could be three or feet off.

19 Q Thank you, sir.

20 MR. KEITH: No more questions.

21 THE COURT: Mr. Cooley, do you have anything?

22 MR. COOLEY: Yes, Your Honor.

23 BY MR. COOLEY:

24 Q Mr. Koenig, before you sit down, if you would, just come
25 back on down to D-10, please, sir.

1 If you could, using your pointer there on the other
2 exhibit, would you indicate to the Court and jury the loca-
3 tion of the vehicle according to your best recollection, that
4 you used in your echo analysis, that is, each vehicle from
5 which you may have calculated that an echo bounced off of?

6 A No, sir, I don't think I testified to that, except for a
7 couple of shots.

8 Q You did use some vehicles?

9 A Yes, sir.

10 Q Do you know which vehicles you used? That's my
11 question.

12 A It varied according to which shot.

13 Q Right. And can you indicate to us the vehicles that you
14 did use; or if it's easier for you, can you say for us right
15 here, looking at those vehicles, "I definitely did not use
16 any of these vehicles"? I want to know which ones you used
17 or you might have used.

18 A I'd have to go down shot by shot and try to--- Again,
19 when we were looking at them, what would look like a nice
20 vehicle to use for one shot may not work on a shot that's two
21 feet away from it might work. It was again done, each indi-
22 vidual one, with a set of echoes we had.

23 Q All right. Well, let's take it shot by shot then, and
24 indicate which vehicles did you use on Number 1.

25 A Okay. Again, I can't tell you positively which ones,

1 just my recollection.

2 Q Yes, sir, your recollection.

3 A Number 1 we would certainly use the school bus, Number
4 11. And I don't remember if we got - I believe we got one
5 off 13.

6 Q Pardon?

7 A I believe it was Vehicle 13 we also got an echo.

8 Q All right. Now your notes would accurately reflect,
9 would they not, which vehicles you used?

10 A No, sir.

11 Q They would not?

12 A No.

13 Q None of the notes that you have with you?

14 A Well, they list a few vehicles here and there, but
15 that's - what we did was, sit down there and, you know, kind
16 of at first guess where it was and see if it worked. It
17 didn't work. We used the building echoes first because they
18 were the best.

19 A Okay.

20 Q And then used vehicles as secondary.

21 A I understand. All right. Take Shot Number 2, which
22 vehicles did you use on that?

23 A We probably either used Vehicle 11 or 12, and again
24 possibly Vehicle 13.

25 Q All right. Shot Number 6.

1 A There's a series of shots, 6 through 10 or 6 through 11,
2 I remember that virtually every shot was a little bit dif-
3 ferent. We were using - sometimes we were getting something
4 off of 9 and sometimes 20, 21, or 22. But it wasn't con-
5 sistent from shot to shot. It varied by just a slight move-
6 ment of the gun.

7 Q All right. But those Shots 6 through 11 you used - you
8 could have used 9, 20, 21 and 22?

9 A Yes, sir.

10 Q All right. All right. If you would then, Shot Number
11 12, or that sequence of shots up there if you prefer to use
12 that.

13 A I believe series 12, 14, 16, 17 and 18, we mostly used
14 building echoes in that one; but my recollection is we might
15 have got a minor echo off 15 or 19. I don't remember.

16 Q All right. Shots 15 and 19?

17 A None.

18 Q All right. Shots - Shot 20?

19 A Again, it was probably 20, 21, or 22; and again that
20 would go for 31, 33, 35 and 39. This little cluster here
21 just north of Vehicle Number 10.

22 Q All right. All right, sir. What about this other
23 cluster of shots to the east of the recreation building, I
24 believe 21, 24 - I've forgotten the other number there.
25 Could you help me?

1 A Well, the only vehicles that could possibly have been
2 used would be 14, 15, and 16, and possibly 13; not probable.

3 Q All right. Now the other remaining shot is Number 38.
4 Did you use any vehicles for that?

5 A No, sir.

6 Q All right. So are those then all of the shots?

7 A No. We have 22, 23, 26, and 27, and we got echoes off
8 20 and 21, Vehicles 20 and 21.

9 Q Twenty and twenty-one for those?

10 A Yes, sir.

11 Q All right, sir. Thank you very much. You may return to
12 the witness stand.

13 Mr. Koenig, how much time have you and your other
14 assistants in the Technical Services Division spent on the
15 audio analysis in this case?

16 A We computed it at one and a half man-years. That
17 doesn't include Special Agent Richards or anybody else's
18 work.

19 Q One and a half man-years?

20 A Yes, sir.

21 Q And that was effective September of 1980 when you sub-
22 mitted your report?

23 A Yes, sir.

24 Q And of course you've spent some time on it since that
25 time?

1 A A small amount, yes, sir.

2 Q First of all, let me mark this as Defendants' Exhibit
3 Number 4 for identification.

4 (The document above
5 (referred to was marked
(for identification as:

6 (DEFENDANTS' EXHIBIT NO. 4.

7 MR. COOLEY: Your Honor, may I approach the
8 witness?

9 THE COURT: Has that been marked for
10 identification?

11 MR. COOLEY: Yes, sir, it's been marked for iden-
12 tification as Defendants' Exhibit Number 4.

13 THE COURT: May I look at it?

14 MR. COOLEY: Certainly.

15 THE COURT: All right, sir.

16 MR. COOLEY: May I approach the witness with the
17 exhibit?

18 THE COURT: All right.

19 BY MR. COOLEY:

20 Q Mr. Koenig, if you would, please examine what has been
21 marked for identification as Defendants' Exhibit Number 4.

22 A Yes, sir.

23 Q Do you recognize that document?

24 A Yes, sir.

25 Q Did you prepare that document?

1 A Yes, sir.

2 Q What is it?

3 A It's a report of the Technical Services Division.

4 Q All right. And if you would, please, sir, that report -
5 excuse me - is dated September the 3rd, 1980?

6 A Correct.

7 Q All right. Would you read to the jury the paragraph -
8 the last paragraph, please, sir?

9 A "Locations of the muzzle blast of Gunshots 3, 4, and 5
10 all probably occurred north of the intersection of Carver
11 Court and Everitt Street, Greensboro, North Carolina, but no
12 exact locations could be determined."

13 MR. LINSIN: Your Honor, I'm going to object to a
14 portion of that report being read to the jury. It's an
15 agent's report and I believe not admissible under the - under
16 Rule 803.

17 THE COURT: I can't conceive of any reason why it
18 wouldn't be admissible. I'll overrule the objection.

19 MR. COOLEY: Thank you.

20 BY MR. COOLEY:

21 Q And a copy of this report was sent to the Chief of
22 Police, Mr. Swing, the Greensboro Police Department?

23 A Yes, sir.

24 Q And to Mr. Rick Greeson, the Assistant District Attorney
25 of Guilford County?

1 A Well, Assistant District Attorney in Greensboro. I
2 don't know what county that is.

3 Q All right, sir. Assistant District Attorney in
4 Greensboro?

5 A Yes, sir.

6 Q You prepared that report and you sent that to those men?

7 A Correct.

8 Q Now calling your attention to your August 1980 report,
9 Mr. Koenig, do you have a copy of that in front of you?

10 A Yes, sir.

11 Q With reference to Shot Number 11, you identified a per-
12 son in a red and white baseball cap or hat---

13 A Yes, sir.

14 Q ---as having fired that shot? Did you also indicate the
15 shoulder position from which that shot was fired?

16 A It says with "with a shoulder weapon on his left
17 shoulder."

18 Q Yes, sir, his left shoulder. Is that your
19 determination?

20 A Yes, sir.

21 Q All right. Mr. Koenig, I'm a little bit confused about
22 subsonic and supersonic. When you refer to some shots as
23 being probably supersonic, does that mean they probably have
24 an end-wave in front of them but you can't be sure?

25 A There's a wave form in front of it that I believe is an

1 end-wave. However, often the weapons are barely supersonic,
2 so the end-wave and the muzzle blast are so close that I
3 don't - when they're that close I just won't make the call.
4 I'll just say I see something that to me is an end-wave, but
5 I won't be a hundred percent; I'll just say it's probable.

6 Q Sometimes the wave forms can be confused enough so that
7 you can't tell whether that supersonic end-wave is actually
8 present?

9 A No, that's not really the problem. The end-wave is very
10 unique. It's just that it's not far enough preceding the
11 gunshot blast - is usually the biggest problem.

12 Q So that it all sort of gets back in together on your
13 visicorder graph?

14 A Yes, sir.

15 Q All right. Now how accurately can your visicorder graph
16 measure in time, that is, the time code up at the top;
17 hundredths of a second, thousandths of a second---

18 A Ten-thousandths of a second.

19 Q Pardon?

20 A Ten-thousandths of a second.

21 Q Ten-thousandths of a second?

22 A Yes, sir.

23 Q That's four decimal places?

24 A Yes, sir.

25 Q Point zero, zero, zero, zero.

1 A We didn't see a reason to go to any higher resolution.

2 Q All right. And you can distinguish between something
3 that appears on that visicorder even if they're only one ten-
4 thousandths of a second apart?

5 A If there were two peaks and they actually both showed the
6 peaks that close, yes, sir.

7 Q All right. Did I understand your - in response to
8 Mr. Greeson's question that you indicated or you stated that
9 in your opinion Shots 3, 4 and 5 were all fired from the same
10 location?

11 A I - they were fired from a location that lacks much echo
12 off buildings or cars. That doesn't necessarily mean they
13 have to be from the same location.

14 Q So is it your opinion that Shots 3, 4, and 5, wherever
15 they came from, all came from the same location?

16 A I don't think I really have an opinion.

17 Q Have you given that sort of an opinion before, sir?

18 A Well, I have when the map has been limited down to just
19 west of the school bus, Number 11, then the main area is that
20 area north of Carver. And that would be a very high
21 probability it would be in that area.

22 Q A very high probability that all three shots came from
23 that single location?

24 A Correct. If you limit it down to just west of the
25 school bus.

1 Q All right.

2 MR. COOLEY: Those are all the questions I have.

3 THE COURT: All right.

4 Do you have anything, Mr. Hall?

5 MR. HALL: I have a few, if Your Honor please. And
6 I'll try to avoid any repetition, of course.

7 THE COURT: All right.

8 BY MR. HALL:

9 Q Mr. Koenig, I think all of us prefaced our questions by,
10 "I want to be sure I understand it correctly," and I want to
11 preface that one the same way.

12 I'm going to place this here, sir. Can you see that
13 from where you are?

14 A Yes, sir.

15 Q You remember this? You illustrated your testimony about
16 how you located the shots that you located which had echoes,
17 correct?

18 A Yes, sir.

19 Q And that was Shots 1, 2 - according to your testimony -
20 Shots 1, 2, 6 through 17 - anyway, 15 and 19 were excluded, and
21 3, 4 and 5 were excluded. Is that correct?

22 A Also 38.

23 Q 38. Okay. Thank you. Now this--- What is that, a
24 trapezoid? Anyway, that odd-shaped drawing outlined in blue
25 and green with a gun here and a microphone here and so on,

1 that illustrates what in effect was your end result, wasn't
2 it?

3 A Correct.

4 Q You didn't have that when you were looking at this
5 visicorder paper?

6 A No. We had the wave form down at the bottom.

7 Q Right. You had this down here (indicating), didn't you?

8 A Yes, sir.

9 Q And this illustration of what came off of your visi-
10 corder, of course, does not show the point of origin of the
11 shot in point of time, does it, because there's no way a
12 microphone could pick that up? It only picked up the sound
13 from the gunshot and the echoes, isn't that correct?

14 A I think I know what you're asking, but I'm not positive.

15 Q Well, in other words, you could not measure from the
16 point of origin, the muzzle to this point, could you
17 (indicating), on this visicorder graph? I'm not trying to
18 confuse you. I think it's perfectly obvious, but I want to
19 be sure it's in the record. The visicorder graph did not
20 have any markings on it showing the time when the gun was
21 actually fired, did it?

22 A Correct.

23 Q Okay. And when you measure these markings on your time
24 line, which you said was up at the top, you can only deter-
25 mine the difference between this orange line and one of these

1 echo lines; is that correct?

2 A That's absolutely correct.

3 Q And that's all that visicorder thing told you, wasn't
4 it?

5 A Well, it also was used to determine if something---

6 Q To identify the shots?

7 A To identify the shots, and the time differences, the
8 time differences between the shots.

9 Q Right. Incidentally, I may have missed it and I apolo-
10 gize, how wide is that visicorder paper when it comes off of
11 that machine?

12 A Twelve inches.

13 Q So it's only twelve inches wide?

14 A Yes, sir.

15 Q Does it come off of a spool or a spindle?

16 A It's got a high-quality gearing mechanism so you can
17 hold the speed exactly accurate.

18 Q But it's rolled up, isn't it?

19 A Yes, it's in a roll.

20 Q And when it comes off it's rolled up into another roll,
21 I suppose? It doesn't just pile up on the floor, does it?

22 A It just piles on the floor, yes, sir.

23 Q Does it? Is it rolled up now?

24 A Oh, yes, sir.

25 Q It's rolled up in two rolls or one roll?

1 A Oh, I would guess there's probably 15 or 20 rolls. I
2 didn't count the exact number.

3 Q In other words, all of it - all of the pieces is on one
4 roll, but there may be 15 or 20 pieces?

5 A Oh, no, sir. There's 15 or 20 rolls.

6 Q That's what I mean. But I mean each piece is on a
7 single roll?

8 A The rolls are like 200 feet long.

9 Q Okay. I believe you testified that in August you went
10 to Mr. Castaneda to get the second copy of the Channel 11
11 video or audiotape, is that correct?

12 A Yes, sir. Do you want the exact date on that?

13 Q Well, no, sir. But did you not testify that was
14 necessary to help you finish up your analysis?

15 A Yes, sir.

16 Q Do you remember which shots you had already finished
17 before you got that second edition of that tape?

18 A No, sir.

19 Q Had you worn the first one out?

20 A What happened was, certain portions had worn out.
21 What happens with a videotape if you leave it in a still
22 position and look at it without moving. the heads spin
23 so fast, given enough time, it will wear that portion of the
24 tape - it will actually wear the hot-side coating right off
25 the tape.

1 Q You probably started with Shot Number 1 and worked
2 toward the end in your analysis, did you not?

3 A No, sir.

4 Q Do you know which shots the first edition of the Channel
5 11 tape was worn out on, or when it became worn out?

6 A No, sir.

7 Q At any rate, you reached a point where you were not
8 satisfied with the accuracy of what you were getting off of
9 the tape?

10 A Right. That was the visual. Now the audio information
11 never wore out. Audio tape recorders - there's very little
12 wear on the tape. It was just the visual information that
13 was starting to wear.

14 Q Oh, I see. Thank you. Now how many of these shots -
15 and you may have already covered this - was it only these two
16 shots there at the corner, on the sidewalk, that you relied
17 on video rather than audio?

18 A Yes, sir.

19 Q Is it correct to say, sir, that the correct location of
20 the vehicles on the drawing that you were working with is as
21 important or more important than the alignment of the
22 buildings?

23 A No, sir. The buildings would be more important.

24 Q Well, to identify the echo, you needed the vehicles
25 located, didn't you?

1 A To some extent. We used the main echoes off the
2 buildings because they were very much higher amplitude than
3 the cars, first; and we did as best we could with those and
4 then used the cars to fill it in.

5 Q To corroborate?

6 A Well, it was more than corroborate. Often we'd have a
7 wider error range and the cars could make it - narrow the
8 range down.

9 Q Were the cars--- Well, Mr. Cooley asked you about the
10 use of the vehicles. You did use the vehicles, did you not,
11 for a number of these shots?

12 A To some extent. Again, I think most of the shots would
13 have been identified even without the cars. But there might
14 have been a wider error rate involved.

15 Q Well, the question is, what you actually did; not what
16 could have been done. And you actually used vehicles for a
17 number of shots?

18 A We used the buildings first. And then after we got as
19 far as we could with that, we went with the automobiles.

20 Q Now, I believe this was covered on your direct examina-
21 tion, but I've forgotten what it was. How many years have
22 you been working on analyzing shots, particularly gunshots,
23 on magnetic tapes?

24 A I've been involved in the laboratory in this field since
25 1974.

1 Q And I believe you testified that the tracing or the
2 transient, which you referred to, has on the visicorder for a
3 gunshot, to a person of your experience, has a very distinct
4 and very unique shape?

5 A Yes, sir. Our whole group is involved with both voice
6 and non-voice sounds, and we looked at gunshot transients for
7 many many years.

8 Q Easily recognizable, is that your testimony?

9 A Well, we haven't found, under good recording conditions -
10 and that's a big "if" - we haven't found anything that can
11 imitate the characteristics of a gunshot sound.

12 MR. HALL: If I may have just a moment, Your Honor.

13 BY MR. HALL:

14 Q Were you instructed or advised not to bring the visi-
15 corder graph paper down here with you?

16 A I was told to just bring my work notes with me.

17 Q Who told you that?

18 A Mr. Linsin.

19 Q Thank you.

20 THE COURT: Do you have anything at all,
21 Mr. Jennings?

22 MR. JENNINGS: Yes, sir, if Your Honor please.

23 THE COURT: Do you have very much?

24 MR. JENNINGS: Well, more than a dozen questions,
25 if Your Honor please. I think it might be---

1 THE COURT: Well, we'll recess now. I don't like
2 to hold the jury too much after 5:00 o'clock.

3 We'll adjourn for the day, ladies and gentlemen,
4 and please report back promptly at a quarter to 9:00 tomorrow
5 morning. Don't discuss the case, ladies and gentlemen. All
6 right.

7 Let the jury go. I want to talk to counsel a
8 minute.

9 (Jury out at 5:05 P.M.)

10 MR. LINSIN: Your Honor, may the witness step down?

11 THE COURT: Oh, yes. You can step down, sir. I
12 forgot you were there.

13 (Bench conference on the record.)

14 THE COURT: As I understand it, you plan to call
15 Mr. Sherer?

16 MR. BELL: Yes, sir.

17 THE COURT: He does have this motion pending with
18 regard to his plea.

19 MR. BELL: Yes, sir.

20 THE COURT: Don't you think it might be advisable
21 for him to have a lawyer here? Have you thought about that?

22 MR. BELL: Well, yes, sir; I've thought about it,
23 and I don't think that - well, he has already decided to renege
24 on his plea agreement, contrary to the advice of his lawyer.
25 And if he declines to testify, we'll be prepared to go ahead

1 with that, but I don't--- It would be advantageous for the
2 government's case and clarity of presentation to go ahead
3 with Mr. Sherer.

4 THE COURT: Well, suppose he comes in here tomorrow
5 and he needs a lawyer to advise him.

6 MR. BELL: Well, we'd be prepared - if he claims a
7 privilege of some type, we'd be prepared to go ahead with a
8 hearing on that. And I don't know that he is entitled to
9 have a lawyer here, under the circumstances.

10 THE COURT: Well, I haven't made up my mind on it.
11 But in any event, do you have a backup witness in case
12 there's a problem?

13 MR. BELL: Yes, sir. I'll go ahead and do that.

14 THE COURT: Okay.

15 MR. KEITH: Could we be told who the backup witness
16 is, so I could just read some of the 23,000 pages tonight?
17 I've read Sherer; I'm ready for Sherer.

18 THE COURT: Well, it's up to the government.

19 Do you want to tell them?

20 MR. BELL: Your Honor, I think we'll have to talk
21 about who we want to have as a backup witness. We have been
22 planning right along for Mr. Sherer---

23 THE COURT: You're not sure yet?

24 MR. BELL: ---and whether or not - just who it is
25 we want to have. We need to consult on that, and I think we

1 might be able to let them know first thing in the morning who
2 we would have.

3 MR. COOLEY: If you could let us know in a little
4 while, we could---

5 MR. HARWELL: Your Honor, there is, as I'm sure you
6 know - I believe a hearing has been set on Mr. Sherer's
7 motion at 2:00 o'clock tomorrow afternoon, and he's going to
8 have to leave here in time to go to Greensboro. I don't know
9 how long the government plans to keep him on the stand, but if
10 he's called in the morning, that will interrupt cross exami-
11 nation unless he's being called for a very narrow, limited
12 purpose and won't take much time.

13 THE COURT: There is some type of a hearing
14 tomorrow.

15 MR. BELL: He does have a hearing set for sometime
16 tomorrow afternoon.

17 THE COURT: That would be where?

18 MR. BELL: Greensboro.

19 THE COURT: Greensboro.

20 MR. BELL: I don't know if that hearing could be
21 put over until this matter is completed, and it might be.

22 THE COURT: All I'm concerned about is that we keep
23 moving.

24 MR. BELL: Yes. Well, we're prepared to move right
25 ahead. We would prefer to move ahead with Mr. Sherer, but -

1 because he fits into the presentation of our case at this
2 point and we are prepared if he claims privilege or otherwise.

3 THE COURT: All right. That's all I wanted to
4 straighten out. All right.

5 MR. BELL: Thank you, Your Honor.

6 (Whereupon, the proceedings were adjourned for the
7 day at 5:10 o'clock P.M., to be reconvened January 31, 1984,
8 at 9:00 A.M.)

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I N D E X

<u>WITNESS</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>
Bruce E. Koenig	101	160		

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E X H I B I T S

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CERTIFICATE

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

Jo Ann M. Snyder

June 13, 1984

Jo Ann M. Snyder
Official Court Reporter

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1 UNITED STATES DISTRICT COURT
 2 MIDDLE DISTRICT OF NORTH CAROLINA
 3 GREENSBORO DIVISION

4
 5
 6 _____)
 UNITED STATES OF AMERICA)

7 V.)

Criminal Action
 No. CR-83-53-G

8 VIRGIL L. GRIFFIN,)
 EDWARD WOODROW DAWSON,)
 9 DAVID WAYNE MATTHEWS,)
 ROLAND WAYNE WOOD,)
 10 JERRY PAUL SMITH,)
 JACK WILSON FOWLER, JR.,)
 11 ROY C. TONEY,)
 COLEMAN B. PRIDMORE, and)
 12 RAEFORD MILANO CAUDLE)
 13 _____)

Winston-Salem, North Carolina
 January 31, 1984
 9:05 o'clock A.M.

VOLUME III

14
 15
 16
 17 EXAMINATION OF BRUCE E. KOENIG

18 BEFORE THE HONORABLE THOMAS A. FLANNERY

19
 20
 21 TRANSCRIPT ORDERED BY: R. JOSEPH SHER, ATTORNEY,
 22 UNITED STATES DEPARTMENT OF JUSTICE
 23
 24
 25

1
2 APPEARANCES:

3 DANIEL L. BELL, II,
4 NORAJEAN FLANAGAN, and
5 GREGORY F. LINSIN, Attorneys,
6 United States Department of Justice,
7 appearing on behalf of the United States of America.

8 FRED R. HARWELL, JR., ESQ.,
9 appearing on behalf of the
10 Defendant Virgil L. Griffin.

11 THOMAS J. KEITH, ESQ.,
12 appearing on behalf of the
13 Defendant Edward Woodrow Dawson.

14 JIM D. COOLEY, ESQ.,
15 appearing on behalf of the
16 Defendant David Wayne Matthews.

17 ROY G. HALL, JR., ESQ.,
18 appearing on behalf of the
19 Defendant Roland Wayne Wood.

20 NEILL A. JENNINGS, JR., ESQ.,
21 appearing on behalf of the
22 Defendant Jerry Paul Smith.

23 JEFFREY P. FARRAN, ESQ.,
24 appearing on behalf of the Defendant
25 Jack Wilson Fowler, Jr.,

S. FRALEY BOST, ESQ.,
appearing on behalf of the
Defendant Roy C. Toney.

HAROLD F. GREESON, ESQ.,
appearing on behalf of the
Defendant Coleman B. Pridmore.

LEON E. PORTER, JR., ESQ.,
appearing on behalf of the
Defendant Raeford Milano Caudle.

- - - - -

1 (Call to order of the Court.)

2 THE COURT: All right. Are you ready to proceed?

3 MR. BELL: Your Honor, I had a preliminary matter
4 I'd like to take up.

5 THE COURT: Would you like to take it up, up here?

6 MR. BELL: If the Court wishes.

7 THE COURT: All right.

8 (Bench conference on the record.)

9 THE COURT: Yes, sir?

10 MR. BELL: Your Honor, in view of the Court's com-
11 ments yesterday concerning Mr. Sherer, at the close of the
12 day, the prosecution gave a lot of thought to how we ought to
13 proceed next. And our conclusion is that we should proceed
14 with Mr. Sherer, if the Court permits, for this reason. We
15 had been basing our order of proof, which we have carefully
16 planned to be as effective as possible, on a presentation for
17 some months now.

18 It was not until a month before trial, after
19 Mr. Sherer had had an interview with Mr. Harwell outside the
20 presence of his own attorney, that he first indicated that he
21 wanted to withdraw his plea. And at that time, even then, we
22 were not sure whether he would actually want to withdraw it
23 until we actually had him up here, an even shorter time
24 before trial. And at that point he made it plain that he did
25 not want to cooperate at all with the government, and has

1 refused to talk to us since then; although, I gather, he has
2 had a number of interviews with Mr. Harwell since he has been
3 waiting here to be a witness.

4 Now we are prepared for the possibility that he
5 will not testify. That is, we are prepared to go ahead and
6 we have a written order requesting the Court to immunize him,
7 written motion and a prepared order, requesting the Court to
8 immunize him if he does assert his privilege. So we are pre-
9 pared to go ahead in that event, without wasting any time.

10 Now it's our view that whether or not Mr. Sherer
11 has counsel or what the status of his plea agreement is, is
12 completely irrelevant to this proceeding, because whatever
13 the status may be, the government does intend to call him as
14 a witness and is prepared to immunize him. So if he
15 withdraws his plea, he'll still be called. If he doesn't
16 withdraw his plea, we also intend to call him as a witness.
17 So therefore we would ask to be able to go ahead with
18 Mr. Sherer; and if the Court feels otherwise and does not
19 want to go with Mr. Sherer until Mr. Sherer has an attorney,
20 then the government would ask that the Court consider
21 granting the government a recess at the close of Mr. Koenig's
22 testimony, until Mr. Sherer gets an attorney.

23 THE COURT: I don't want to delay these pro-
24 ceedings. This case has to move.

25 MR. BELL: Yes, sir. I understand that, and we did

1 arrange to bring in witnesses if that was going to be the
2 Court's position. It's going to throw our case out of order,
3 which will have a harmful effect on us, but we will have the
4 witnesses if the Court disagrees. I don't think that the
5 recess would be a lengthy one, because I think Mr. Koenig is
6 going to be on the stand for a substantial amount of time.

7 THE COURT: Well, I'm not going to permit a lot of
8 repetitious questioning of Mr. Koenig either.

9 Do you have any comment?

10 MR. HARWELL: Yes, sir. Just two. First of all,
11 I'm going to give Mr. Bell the benefit of the doubt. It
12 seems his memory is at fault, Your Honor; but this is the
13 second time on the record at this trial that he has said that
14 Mr. Sherer did not indicate that he wanted to withdraw his
15 plea until after he had first talked with me.

16 When there is an evidentiary hearing on this
17 matter, I'm sure that the record will reflect that
18 Mr. Sherer first advised the government of his interest in
19 withdrawing his plea on the 2nd of December, and that I first
20 contacted him on the 5th of December. The 2nd was a Friday,
21 when he was here in Winston-Salem for an interview.

22 Mr. Sherer's attorney will confirm that that
23 occurred. I did contact him on Friday, the 5th, and as I
24 said in court the other day, the first thing he told me was
25 that he was interested in withdrawing his plea, and that he

1 had already told the government attorneys about that.

2 THE COURT: When was that?

3 MR. HARWELL: The 5th of December, three days
4 later. I suppose Mr. Bell thinks I'm a far more persuasive
5 individual than I actually am, but I did not have anything to
6 do with Mr. Sherer bringing that point up to him first, and
7 haven't had anything to do with his decisions since then.
8 I'm fully aware of the potential conflict between Mr. Sherer
9 and my client; and I have been careful in my discussions with
10 him to make him repeatedly aware of that, and to remind him
11 that I have been aware of it straight through.

12 My understanding, of course, is that Mr. Sherer is
13 not the property of the government and that I am entitled to
14 talk to him as long as he is willing to talk to me, and I've
15 taken advantage of that opportunity.

16 I have also discussed the matter with the attorney
17 who was representing Mr. Sherer at that time, and he has
18 absolutely no problem with me having talked to Mr. Sherer out
19 of the presence - out of his presence. As a matter of fact,
20 he mentioned to me when I brought it up, that the government
21 attorneys had been doing it for a long time, and he didn't
22 see anything wrong with it.

23 Now on the other matter, as to whether Mr. Sherer
24 testifies today, I don't believe that I am in a position to
25 even suggest to the Court which position the Court ought to

1 take on that. I have the interest of my client at heart, and
2 at least in some respects, they may be in conflict with
3 Mr. Sherer's interests. I think that's a decision that the
4 defense attorneys in this case really ought not to have any
5 input in making. As for myself, I'm happy for Mr. Bell to
6 call Mr. Sherer today, tomorrow, next week, or whenever he
7 wants to. I think that's his prerogative.

8 But I am growing tired, Your Honor, of having
9 Mr. Bell repeatedly say that Mr. Sherer didn't indicate his
10 interest in withdrawing his plea until after he had first
11 talked to me, because that is not true. I do agree with
12 Mr. Bell that withdrawing the plea and testifying are two
13 separate issues. And I will tell you candidly, in
14 Mr. Bell's presence, that I have no indication that
15 withdrawing the plea is actually going to change Mr. Sherer's
16 testimony. I've looked at his statements now, and I think
17 they're two separate issues.

18 MR. BELL: Your Honor, I might point out that
19 Mr. Sherer gave a statement to the Greensboro Police
20 Department and to the FBI, November of 1979. He testified
21 before the grand jury at length on two occasions, before any
22 plea agreement was reached. And on all of those occasions he
23 provided a substantial amount of incriminating information,
24 and I think his testimony probably is going to be the same.
25 However, the evidence may show the chronology of his effort

1 to withdraw from the plea agreement.

2 It is our position that it is definitely not rele-
3 vant to this proceeding. If we did go ahead with Mr. Sherer
4 right now, it does not affect, one way or the other, any
5 rights that the defendants here have, and it doesn't really
6 affect Mr. Sherer or his plea. He's already broken the plea
7 agreement. And it would be our intention if he does assert
8 his privilege, to move the Court to compel him to accept a
9 ground for immunity to testify.

10 THE COURT: Well, let me do this. Do you have the
11 order granting him immunity?

12 MR. BELL: Yes, sir.

13 THE COURT: Submit that order to me and let me
14 think about it.

15 MR. BELL: Yes, sir. I can do that right now, if
16 the Court---

17 THE COURT: All right. Why don't you do that?

18 MR. BELL: I just need to date it and sign it and
19 I'll hand it to you right now and serve it on the defense.

20 THE COURT: All right.

21 MR. HARWELL: One point, Your Honor, I think that
22 it can be said that - it cannot be said that the plea
23 agreement and the withdrawal of the plea agreement are irrel-
24 evant to these proceedings. Mr. Bell told the jury in his
25 opening statement that Mr. Sherer had pled guilty to the

1 count one indictment, and I think we're going to have to deal
2 with that due to the fact that it asserts an assumption.

3 MR. BELL: Certainly I agree with Mr. Harwell on
4 that. I think the circumstances surrounding the plea
5 agreement are a proper subject for the jury to hear, and I
6 see no problem with that at all.

7 THE COURT: All right. Give me the immunity order
8 and let me think about it over the recess, as to how to
9 handle this. In any event, Koenig will probably take the
10 rest of the morning.

11 Sherer does have an appointment over in Greensboro
12 at 2:00 o'clock, doesn't he?

13 MR. BELL: Yes, sir, at 2:00. And I don't think it
14 would take - that particular hearing would not take very
15 long, I don't believe.

16 THE COURT: Well, the only purpose of the hearing
17 is to appoint him an attorney, as I understand.

18 MR. BELL: Yes, sir. Yes, sir. It's not for the
19 plea withdrawal hearing. Though the government - I can
20 advise the Court the government is going to be prepared to
21 move ahead very quickly on that matter also.

22 THE COURT: Well, as you point out, whether he
23 withdraws the plea or not is immaterial if he's given
24 immunity.

25 MR. BELL: Yes, sir.

1 THE COURT: He'll have to testify, that's all, and
2 suffer the consequences.

3 MR. BELL: Yes, sir.

4 THE COURT: All right. Let's see now if we can't
5 speed Koenig up and get moving.

6 MR. BELL: All right, sir.

7 THE COURT: All right. Thank you.

8 (End bench conference.)

9 THE COURT: All right. Bring the jury in.

10 MR. BELL: Your Honor, may I approach the bench?

11 THE COURT: Yes, all right.

12 (Jury in at 9:20 A.M.)

13 THE COURT: Good morning.

14 THE JURORS: Good morning.

15 THE COURT: Very well, let's proceed.

16 Now who's next? I believe Mr. Jennings; are you
17 next?

18 MR. JENNINGS: Yes, sir.

19 THE COURT: All right.

20 THE CLERK: Mr. Koenig, step forward and take the
21 witness stand, please. You've previously been sworn.

22 THE COURT: All right.

23 MR. JENNINGS: Thank you, Your Honor.

24 - - - - -

25 BRUCE E. KOENIG, GOVERNMENT'S WITNESS, PREVIOUSLY

1 SWORN

2 CROSS EXAMINATION (CONTINUING)

3 BY MR. JENNINGS:

4 Q Mr. Koenig, you testified that you had spent approxi-
5 mately one and one-half man-years in conducting your analysis.

6 A My staff and I did.

7 Q What does that translate to in terms of hours?

8 A Well, we work a 50-hour week times 75 weeks, whatever
9 that would work out to be.

10 Q Now you based your analysis in part on Mr. Richards' pho-
11 togrammetry report, did you not?

12 A Yes, sir.

13 Q Now when did you receive that report?

14 A My recollection is like April or May of 1980.

15 Q I see. Now referring to this chart, can you show us
16 where the cameras were placed?

17 A Well, the cameras varied on various shots.

18 Q Can you show us a general area of where the cameras
19 were?

20 A Well, most of the gunshots, the camera was on the
21 southeast corner, near the southeast corner of Vehicle 29;
22 but at times it was out in the street.

23 THE COURT: Do you want to step a little bit to the
24 side so I can see?

25 A But on some of the earlier shots it was also out in the

1 street here, by Vehicle Number 14.

2 BY MR. JENNINGS:

3 Q Okay. Now what--- I believe you testified as to the
4 effects of some of the automobiles up on Carver Drive, and
5 you testified as to their effect on your analysis. Did these
6 automobiles play any part in your analysis?

7 A Are you talking about the vehicles at the very south
8 part of the chart?

9 Q Right.

10 A My recollection is, we had a few echoes off the glass on
11 Vehicle Number 29, but that was basically it.

12 Q All right. Did any of those vehicles tend to block any
13 of the echoes from sound?

14 A No, sir. We didn't find any problems with that.

15 Q Now let me ask you about the timing of some of the
16 shots, according to your opinion.

17 A Can I get my notes?

18 Q Yes, sir. You can take the witness stand also.

19 Okay. According to your analysis, in your opinion, what
20 was the timing of Gunshot Number 12?

21 A It occurred 51.409 seconds after Gunshot Number 1.

22 Q And relating to the Channel 11 time code, what was the
23 time?

24 A It was approximately 12:19:26.

25 Q Now what, in your opinion, was the timing of Gunshot

1 Number 14?

2 A It occurred 51.912 seconds after the first gunshot,
3 which lines up with 12:20:09 on Channel 11 video.

4 Q Okay. And what was the timing of Gunshot Number 16?

5 A It was 53.129 seconds after the first gunshot. It was
6 at 12:21:16 on the Channel 11 video.

7 Q Okay. Now who did you determine fired those shots?

8 A That's 12, 14 and 16?

9 Q Yes.

10 A The first two were probably fired by a white female in a
11 yellow raincoat; and the last one, Number 16, was fired by
12 the white female in the yellow raincoat.

13 Q Now the time, 12:21:07 on the time code, Channel 11,
14 comes between Shots 14 and 16, does it not?

15 A That was 12:21:07?

16 Q Yes, sir.

17 A Yes, sir, that's correct.

18 Q I hand you this photograph--- Excuse me.

19 MR. JENNINGS: Mr. Greeson, our last exhibit was
20 what number?

21 MR. GREESON: That would be Number 5, I believe,
22 Mr. Jennings.

23 MR. JENNINGS: Thank you.

24 - - - - -

25

1 (The photograph above
2 (referred to was marked for
3 (identification as:

4 (DEFENDANTS' EXHIBIT NO. 5.

5 BY MR. JENNINGS:

6 Q I hand you a photograph marked for identification as
7 Defendants' Exhibit Number 5---

8 MR. LINSIN: Your Honor, could counsel see the
9 photograph?

10 MR. JENNINGS: Excuse me.

11 THE COURT: Let me take a look at it.

12 MR. JENNINGS: Yes, sir.

13 THE COURT: All right.

14 BY MR. JENNINGS:

15 Q And I ask you if that fairly and accurately represents
16 your testimony as to the white female in the yellow raincoat?

17 A Yes, sir; she's back in the shadows, behind the end of
18 this pickup truck with the camper top on it.

19 Q And in what position is she in that photograph?

20 A What position?

21 Q Yes, sir. Has she got her arm extended?

22 A Yes, sir. She has a pistol in her hand. You can see it
23 better in other shots. A pistol in her hand, stretched out,
24 shooting.

25 Q All right, sir.

THE COURT: Why don't you just hold that up and let

1 the jury see it so they can follow. Just walk down in front
2 of the jury and hold it up like that, so they can understand
3 what you're talking about.

4 MR. JENNINGS: All right. I'll be glad to.

5 BY MR. JENNINGS:

6 Q All right. What time - just to save a little time, just
7 refer to the Channel 11 time code, if you will. On the
8 Channel 11 time code, what time did you determine that what
9 you say was Shot Number 17 was fired/

10 A 12:21:21.

11 Q And who fired that shot?

12 A Again, the white female in the yellow raincoat.

13 Q And referring again to the Channel 11 time code, at what
14 time do you say Shot Number 18 was fired?

15 A 12:22:10.

16 Q Now how much time elapsed between Shot Number 12 that
17 you say was fired by this woman in the yellow raincoat and
18 Shot Number 18?

19 A Approximately two and a half seconds.

20 Q All right, sir. Now what time was what you refer to as
21 Shot Number 21 fired?

22 A The Channel 12 - Channel 11 time code is 12:24:23.

23 Q And again, referring to the Channel 11 time code, what
24 time do you say what you call was Shot Number 24?

25 A Shot Number 24?

1 Q 24.

2 A Shot Number 24 occurs at 12:28:25.

3 Q Shot Number 29?

4 A 12:31:28.

5 Q Shot Number 30?

6 A 12:33:13.

7 Q Shot Number 32?

8 A 12:35:06.

9 Q Shot Number 36?

10 A 12:51:23.

11 Q Shot Number 37?

12 A 12:55:03.

13 Q All right. Now could you step down and refer to this

14 model for your next question?

15 Now those shots that I've just asked you about,

16 Mr. Koenig, are they represented by the dots here

17 (indicating)?

18 A Yes, sir. Just east of the recreation building.

19 Q All right.

20 MR. JENNINGS: Excuse me, Mr. Linsin.

21 THE COURT: Were all the jurors able to see that?

22 All right.

23 BY MR. JENNINGS:

24 Q Now, Mr. Koenig, referring to those dots here

25 (indicating), at the Morningside Homes office and recreation

1 center, your margin of error does not preclude the possibil-
2 ity that one or more of those shots were fired from up on
3 these steps, does it?

4 A No. They could not have been fired up on these steps.

5 MR. JENNINGS: Thank you. I have no further
6 questions.

7 THE COURT: Very well.

8 MR. FARRAN: I have just a few questions, Your
9 Honor.

10 THE COURT: All right.

11 BY MR. FARRAN:

12 Q Mr. Koenig, first, did I understand you yesterday to say
13 that the state trial was the only case involving gunshots
14 where you testified for the defendants?

15 A That's my recollection, yes, sir.

16 Q Now if you will, I'd like to direct your attention to
17 Shots 26 and 27 in your report. I believe you indicated that
18 that shot - those shots were observed visually and located
19 from the audio, is that correct?

20 A Correct.

21 Q And those shots were fired by the tall white male with
22 shoulder-length hair in the bluejeans outfit?

23 A Yes, sir.

24 Q All right. And yesterday, do you recall identifying
25 that individual as Jack Fowler on the government chart?

1 A I believe that's so.

2 Q And from the audio you were able to determine, I
3 believe, that he had fired two other shots, 22 and 23; is
4 that right?

5 A Well, he probably fired the other two shots, yes, sir.

6 Q And the weapon that Mr. Fowler had, I believe you have
7 testified, was very distinctive and unique - at the scene
8 that day; is that correct?

9 A Compared to the other guns being fired, yes, sir.

10 Q I believe yesterday you said that that weapon or the
11 ammunition was highly supersonic and had the clearest end-
12 wave characteristics of this whole case. Is that correct?

13 A That's correct; yes, sir.

14 Q Okay. Describe to the jury, if you will, how those end-
15 waves - or why those shots were so distinctive to you.

16 A Well, the main reason was that the very high velocity of
17 the weapon, close to three times the speed of sound,
18 separated this end-wave that precedes the gunshot blast by so
19 much. It was just very distinctive, very obvious.

20 Q And how many of those shots did you determine were fired
21 by that rifle?

22 A Well, that rifle, with that ammunition?

23 Q Yes.

24 A Four.

25 Q And those were Shots 22, 23, 26, and 27; is that

1 correct?

2 A Yes, sir.

3 Q Therefore, 21 shots had already been fired before that
4 individual fired his first shot?

5 A That's correct.

6 Q Now in connection with your work in this case, did you
7 test fire an AR-180 rifle like the one that Mr. Fowler had?

8 A I can't say that's the weapon he had. I was told that
9 was one of the weapons at the scene and I did test fire
10 the weapon, yes, sir.

11 Q And in addition to that, as an FBI agent, you had pre-
12 vious experience firing those kinds of rifles or similar
13 rifles, didn't you?

14 A I've fired the M-16 considerably, which is a somewhat
15 close rifle to that, not exactly the same. It's a very high
16 velocity, relatively small caliber rifle.

17 Q And based on your experience, you know that people who
18 do target shooting, or whatever, with those kinds of rifles
19 frequently save their spent casings after shooting; is that a
20 fair statement?

21 A I think a lot of people that shoot privately do that to
22 save cost.

23 Q Now the FBI does not do that, isn't that correct? You
24 do not save your spent casings, you purchase new ones?

25 A Well, that's not totally true. We save the casings but

1 we do not use them normally to reload them. We sell them
2 back to the manufacturer.

3 Q Okay.

4 A That's my understanding. I don't do that personally.

5 Q But people who do target shooting, or whatever, it is a
6 common practice to save the spent casings and to reload them,
7 simply because it's a lot cheaper?

8 A That's correct.

9 Q Now in this case you became aware from the Guilford
10 County District Attorney's office back in 1980 that they had
11 nine spent .223 casings that they found at the scene; is that
12 correct?

13 A The district attorney told me that, yes, sir.

14 Q And after learning that, did that change or alter your
15 opinion in any way, that that weapon was fired four times,
16 not nine times?

17 A No, sir, it didn't change my opinion at all. The weapon
18 was only fired four times.

19 Q Pardon me?

20 A The weapon was only fired four times with that
21 ammunition.

22 Q Right. Thank you, sir.

23 MR. BOST: Your Honor, at this time, we'd like to
24 use the Channel 11 tape to illustrate a couple of things, and
25 Mr. Greeson is going to explain that.

1 THE COURT: All right.

2 MR. GREESON: Mr. Brereton, do you want to load
3 Channel 11 for us - the one with the time code? And if you
4 would, advance it to about---

5 MR. BOST: ---12:28:05, I think, Mr. Brereton.

6 MR. GREESON: May I go ahead and operate that
7 little knob, since I know where it is?

8 MR. BRERETON: Go ahead.

9 MR. BOST: Thank you, Mr. Brereton.

10 BY MR. BOST:

11 Q Mr. Koenig, I'm going to ask you to follow closely.
12 Watch--- Which monitor can you see? Maybe you'd like to
13 step down here. I want to ask you to follow - and I'll
14 explain this for the record - this man who appears to be
15 running towards the building.

16 MR. LINSIN: Your Honor, I cannot hear what
17 Mr. Bost is saying.

18 MR. BOST: I'm going to say it for the record. I
19 want Mr. Koenig to follow the gentleman who in this frame,
20 for the record, is 12:28:04, and appears to have a plaid
21 shirt on, and he is north of Everitt Street and east of Carver
22 Drive in the grassy area, and he appears to be heading toward
23 the corner of the building which is 1700 Carver Drive.

24 MR. GREESON: Now could you step back and do that
25 again for the ladies on the end?

1 MR. BOST: I'm sorry. I'm talking about the
2 gentleman right here (indicating), who is behind the person
3 in the light shirt and who appears to be heading toward the
4 brick building which is 1700 Carver Drive. And let me point
5 that out up here to make sure. We're talking about this
6 gentleman right here, who is bent down somewhat at this
7 point, but appears to be going in that direction
8 (indicating).

9 If you would just advance it a couple of frames,
10 Mr. Greeson. That's fine.

11 BY MR. BOST:

12 Q Now, Mr. Koenig, at this point, which is 12:28:06, would
13 you just state what that man appears to be doing; what are
14 his movements?

15 A It's really tough to tell what his movements are. He's
16 just - you know, it's such a short piece of video. There he
17 seems to be straightening up.

18 Q And does he appear to be moving toward the area which is
19 1700 Carver Drive?

20 A He seems to be, yes, sir.

21 Q Okay. If you would watch that closely as Mr. Greeson
22 advances the frames very slowly.

23 (Whereupon a portion of the Channel 11 videotape
24 was viewed.)

25 MR. BOST: Stop right there, Mr. Greeson.

1 BY MR. BOST:

2 Q Now what appears to be happening in that picture with
3 that gentleman?

4 A Well, he seems to have stopped and is now turning toward
5 the west.

6 Q Turning toward the west?

7 A Yes, sir.

8 Q Turning back?

9 A Turning back towards the west.

10 Q Okay. And that's at 12:29, is that correct?

11 A Correct.

12 Q 00.

13 MR. BOST: Okay, Mr. Greeson, if you would advance
14 that a little further. If you would stop at that point.

15 BY MR. BOST:

16 Q Now at 12:20---

17 MR. BOST: One more frame.

18 MR. GREESON: Forward?

19 MR. BOST: One more frame forward.

20 BY MR. BOST:

21 Q ---12:29:05, what are his movements; how would you
22 describe that?

23 A He looks like he has lost his balance and may be
24 falling. He looks more like in a southwest direction.

25 Q Okay. He appears to be falling?

1 A Yes, sir.

2 Q Okay. Now referring to your conclusions in your charts,
3 Mr. Koenig, what time does the 25th shot occur?

4 A 12:30:05.

5 Q 12:30:05. So that the 25th shot has not yet been fired?

6 A No, sir. It will be fired in about one second.

7 Q Be fired in about one second. Okay.

8 MR. BOST: Run that further, a little bit further,
9 Mr. Greeson. Okay. You can stop at that point.

10 BY MR. BOST:

11 Q Now would you describe the movements of this gentleman
12 at 12:29:26?

13 A Now he's turned toward the east. It looks like - I said
14 he's off balance or something. It's hard to tell.

15 Q Does he appear to have grabbed his right arm with his
16 left hand?

17 A He may have. It's tough to say for sure.

18 Q At this point has the 25th shot been fired?

19 A No, sir.

20 Q Okay. And again, what time did you say the 25th shot is
21 fired, in your opinion?

22 A 12:30:05.

23 Q In your opinion, who fired that shot?

24 A It was fired by a white male in a red flannel-like shirt
25 and bluejeans.

1 Q Did you identify that man as Roy Toney?

2 A I believe so.

3 Q By the way, where did the 24th shot come from on this---

4 A The 24th shot came next to the Morningside Homes
5 recreational building.

6 Q Over in this area (indicating)?

7 A Correct.

8 Q Now I believe, Mr. Koenig, you said yesterday that you
9 did not---

10 MR. BOST: Mr. Greeson, that's really all I'll
11 need.

12 MR. GREESON: Do you need the tape any more?

13 MR. BOST: Don't need the tape any more. Thank
14 you.

15 MR. GREESON: Shall we just leave the monitors up
16 while you finish?

17 MR. BOST: Yes.

18 BY MR. BOST:

19 Q Mr. Koenig, I'll hand you a picture that has been marked
20 as Defendants' Exhibit Number 6.

21 (The photo above referred
22 (to was marked for
(identification as:

23 (DEFENDANTS' EXHIBIT NO. 6.

24 THE COURT: Let me see it.

25 MR. BOST: Yes, sir.

1 THE COURT: All right. Go ahead.

2 BY MR. BOST:

3 Q This picture designates the time on Channel 11 as
4 12:29:20, and I'll ask you to look at this and tell me if
5 that illustrates part of what we've just seen.

6 A Yes, sir.

7 Q And what's shown on there also happens before the 25th
8 shot, does it not?

9 A That's correct.

10 Q Okay.

11 MR. BOST: Your Honor, could I show this to the jury?

12 THE COURT: Yes. Just do the same thing that was
13 done previously. Just walk down in front of the jury.

14 MR. GREESON: Would it perhaps be better just to
15 pass it, Your Honor? We have no objection to that.

16 THE COURT: All right. You may pass it.

17 BY MR. BOST:

18 Q Mr. Koenig, if you would step down here for just a
19 second, please, sir. Looking at the chart of caravan members
20 from the video--- Maybe you could just help hold it on that
21 side for just a second. I'd like you to look at this picture
22 which has been identified as Harold Flowers and tell us if
23 that appears to be the person who was falling in the pre-
24 ceding picture.

25 A The basic description is the same, I'd say.

1 Q Okay. Mr. Koenig, would you compute the difference in
2 time between the 15th and 28th shots on Channel 11; would you
3 tell me what that difference is?

4 A The 15th and 28th?

5 Q That's correct.

6 A Slightly less than eleven seconds.

7 Q Okay. Have you got it more precise than that? Did you
8 subtract the two figures?

9 A Yes, sir; 10.808.

10 Q 10.808. Okay. And if you would compute the difference
11 between the 19th and 28th shots.

12 A 8.947 seconds.

13 Q Okay. Now you said with the - I believe with the 15th
14 and 19th shots, that you did not determine those by audio,
15 but by visual observation of the tapes; is that correct?

16 A Yes, sir.

17 Q Okay. And I believe you also said that with Channel 8
18 you did not determine a time code and therefore can't deter-
19 mine the sequence of the shots on Channel 8 or the time, pre-
20 cisely, as you now have the information.

21 A Channel 8, the audio itself was distorted and we---

22 Q Okay. Well, let me ask you this. If on Channel 8 you
23 could see what you saw on Channel 11, i.e., the 15th and 19th
24 shots, the visual observations, would it then be a simple
25 matter to take the difference in time that you've just com-

1 puted between the 15th and 28th or the 19th and 28th, add
2 that to the time on Channel 8, and know fairly accurately
3 when the 28th shot would have been fired on Channel 8? Is
4 that a fairly accurate way to do it?

5 A If the film is continuous and the camera was fairly
6 accurate, speedwise, yes.

7 Q That would be okay.

8 Thank you, Mr. Koenig.

9 MR. BOST: I have no further questions.

10 THE COURT: All right.

11 MR. GREESON: Mr. Brereton, do I now push "play" to
12 bring it back to where it was before - so I can use it now?

13 Is that all?

14 BY MR. GREESON:

15 Q Now, Mr. Koenig, I'm going to ask you a couple more
16 questions and see if I can run this thing and think at the
17 same time.

18 MR. GREESON: Do we have to turn the volume down on
19 every single set in order to---

20 MR. BRERETON: Yes, sir.

21 BY MR. GREESON:

22 Q All right, Mr. Koenig. You're looking at a monitor; is
23 that correct?

24 A Yes, sir.

25 Q The man that you testified about having the gun up in

1 the air is standing on the running board of a blue-over-white
2 pickup truck, is that correct?

3 A You have better eyes than me. I can't see the running
4 board or whether it's white, but---

5 Q Well, he's standing up beside the right-hand window of
6 the cab of the pickup truck, is that correct?

7 A That's correct.

8 Q And the top of the pickup truck is a light blue, isn't it?

9 A It looks that way, yes, sir.

10 Q Well, had you seen that truck before, in the videotapes?

11 A Yes, sir.

12 Q And that's when it came by the first time, with the man
13 in it, and you recognized it as a blue and white pickup truck
14 then, didn't you?

15 A I believe that's correct, yes, sir.

16 Q And do you recall that the bed of the pickup truck is
17 white on top?

18 A I really don't remember that.

19 Q Now can you see a little bit more of the pickup truck
20 there, and see the white---

21 A ---white trim?

22 Q ---the white trim below the blue cab?

23 A Yes, sir.

24 Q All right, sir. Now that - the cab on that pickup truck
25 sticks up higher than those other two cars behind it, doesn't

1 it?

2 A That's correct.

3 Q Do you have an estimate of approximately how high it
4 sticks up?

5 A No, sir.

6 Q It would be a couple of feet, though, would it not?

7 A It's hard to tell with the photo information and what
8 angle the camera is at. Most pickup trucks are several feet
9 higher than cars.

10 Q Now I'm going to run this forward, and I'll ask you,
11 sir, if that was the third shot that was just fired?

12 A About a third of a second or so before?

13 Q Yes, sir, the one we heard.

14 A Yes, sir.

15 Q And was that the fourth shot, sir?

16 A Well, you're quite a bit past the - you're almost a
17 second past the fourth shot.

18 Q Well, but the fourth shot has just been fired?

19 A Yes, sir.

20 Q And the fifth shot is fired when?

21 A At 12:00:03.

22 Q All right. Now, Mr. Koenig, I'll ask you to look and
23 see if you see that pale yellow car right up there, just this
24 side of the bus, that we saw just a few minutes ago - before
25 we were talking about the pickup truck. Do you see it?

1 A The one with the black vinyl top?

2 Q Yes.

3 A Yes, sir.

4 Q And although it's difficult to see because it's
5 obscured, can you see a small part of the white car that's in
6 front of it?

7 A It could be. It's very difficult to see, like you say.

8 Q All right, sir. And up there beside the bus, do you
9 still see the pickup truck - do you see the white top on the
10 pickup truck?

11 A I'm not positive I do.

12 Q But you see something that's approximately the same
13 height and - excuse me. I said white top; I mean the blue
14 top on the pickup truck.

15 A There's something there that could be, yes, sir; but I
16 can't say for sure.

17 Q All right, sir. Now I need to go back just a moment.
18 Now, Mr. Koenig, the position that that pickup truck is in
19 now corresponds to Shot Number 1 here on Government's Exhibit
20 D-10?

21 A Approximately.

22 Q Yes, sir. And when you plotted that shot--- Excuse me.
23 Shot Number 1, for the members of the jury that couldn't see
24 it, is right there (indicating); is that correct?

25 A Yes, sir.

1 Q And you testified and I believe you even drew on our
2 little drawing the other day, some of the echoes that you
3 were able to get. The biggest echo was off of this building
4 here (indicating)?

5 A Correct.

6 Q And it was a strong echo, although slightly muffled by
7 the bus?

8 A Correct.

9 Q And you also got an echo off the bus?

10 A That's correct.

11 Q And you also got an echo off the back wall?

12 A Yes, sir.

13 Q Did you get any other minor echoes to place that shot?

14 A I believe we got echoes off one of those two buildings
15 to the south of Gunshot Number 1.

16 Q Perhaps two more echoes?

17 A Well, I think one of the buildings we got an echo and
18 the other one we didn't.

19 Q All right, sir.

20 A That was my recollection.

21 Q At any rate, had this gentleman fired from that position
22 again, you would have been able to plot it in the same manner
23 as you did Number 1; is that correct?

24 A Yes, sir.

25 Q Okay.

1 MR. GREESON: If I could have just a minute, Your
2 Honor.

3 Mr. Brereton, would you come load Channel 2 for me
4 now, please, sir? The time code copy.

5 MR. KEITH: May I assist Mr. Greeson in running the
6 machine, Your Honor?

7 THE COURT: All right.

8 MR. GREESON: Okay. Go ahead and put it on. Let's
9 see where we are now, Tom.

10 All right. Now advance it, if you would, to
11 22:01:25.

12 BY MR. GREESON:

13 Q Now, Mr. Koenig, at this point on the Channel 2 tape, is
14 that where Shot Number 3 is fired?

15 A Actually it's fired slightly before this place.

16 Q All right, sir.

17 MR. GREESON: Advance to 22:02:12.

18 BY MR. GREESON:

19 Q And is this approximately the place on the Channel 2
20 tape where Shot Number 4 is fired, sir?

21 A Yes, sir.

22 MR. GREESON: Okay. Advance it, if you would, to
23 22:06:25.

24 BY MR. GREESON:

25 Q And this is approximately the place on the Channel 2

1 tape where Shot Number 5 is fired?

2 A Yes, sir.

3 MR. GREESON: Okay, Tom. Let me get in there and
4 do it now. It's kind of---

5 BY MR. GREESON:

6 Q Mr. Koenig, can you make out the rear-end of the pale
7 yellow car that you saw previously, when the man was holding
8 the gun up beside the pickup truck?

9 A No, sir. I don't think I'd be in a position to say
10 that.

11 Q You can't see the pale yellow right there, beside the
12 school bus?

13 A Well, it could be, but---

14 Q I'm going to run it regular speed in a minute, and
15 unfortunately the camera is panning so fast that perhaps you
16 can see it better at regular speed. But I did want to point
17 out what I'm looking at.

18 Now can you see the pale yellow car, Mr. Koenig?

19 A Yes, sir.

20 Q Okay. And it's still in approximately the same position
21 that it was in when we saw the man a while ago, standing on
22 the running board or standing beside the cab of the blue and
23 white pickup?

24 A Approximately, yes, sir.

25 Q And for the record, the time on that is 22 seconds -

1 excuse me - 22 minutes, 16 seconds, 16 frames at this point,
2 where we see the yellow car still there.

3 A Yes, sir.

4 Q All right, sir. Mr. Koenig, at 22:17:01, let me ask you
5 if you see the yellow - the small yellow pickup truck that's
6 across the street, along the curb, across from the bus?

7 A Yes, sir, I do.

8 Q And over the hood of that small yellow pickup truck, can
9 you see the white bed of the blue and white pickup?

10 A Yes, sir, I believe that's probably what it is.

11 Q And the frame number of that was 22:17:01?

12 A Yes, sir.

13 Q And that is some eleven seconds, approximately, after
14 the firing of Shot Number 5, is that not correct?

15 A Yes, sir, approximately.

16 MR. GREESON: Thank you. No further questions.

17 MR. PORTER: No questions, Your Honor.

18 THE COURT: Is that all from the defense side?

19 MR. COOLEY: Your Honor, I have just one matter on
20 the videotape.

21 THE COURT: All right.

22 MR. COOLEY: If you'd put the Channel 11 tape back
23 on. I apologize.

24 BY MR. COOLEY:

25 Q Mr. Koenig, as a preliminary question while Mr. Keith is

1 putting the tape on, would you refer to your report, please,
2 sir? And recalling your report as well as your viewing of
3 the videotapes, is it your recollection whether there were
4 any other individuals other than a person in a red and white
5 baseball cap located in the area that I'm pointing to right
6 here (indicating)?

7 A We saw what looked like at least one other person back
8 there, yes, sir.

9 Q All right. Were you able to identify who that person
10 was?

11 A No, sir. I don't believe---- The problem was that
12 people were moving in and out from behind that--- I can't
13 see the numbers. Is that Number 10, that van?

14 Q Yes.

15 A ---at times, so it was difficult to say who was back
16 there at any instant.

17 Q I see. But is it fair to say that throughout the entire
18 sequence there were at least two persons who were back there,
19 and sometimes more?

20 A At times there were certainly at least two people there.
21 Other times there was no visual information, so I really - I
22 couldn't say what was happening.

23 Q All right.

24 MR. COOLEY: Mr. Keith, could you advance the
25 Channel 11 tape to 12:28:05.

1 MR. GREESON: Did you say Channel 11?

2 MR. COOLEY: Yes.

3 I'm sorry. That's the wrong channel. It's 12.
4 It's 12:18:27.

5 (Whereupon, a portion of the Channel 12 videotape
6 was viewed.)

7 BY MR. COOLEY:

8 Q All right, Mr. Koenig. If I may call your attention to--
9 Can you see this monitor at all?

10 MR. COOLEY: Or if I may approach the witness, Your
11 Honor, I'll point to the area.

12 THE COURT: All right.

13 BY MR. COOLEY:

14 Q If I can call your attention to this area right here
15 (indicating) on the monitor.

16 THE COURT: Well, stand so you don't block the
17 jury's view.

18 MR. COOLEY: All right.

19 THE COURT: Stand back a little bit.

20 BY MR. COOLEY:

21 Q I'm asking, Mr. Koenig, about this area right here on
22 the monitor.

23 MR. COOLEY: And if you would advance that slowly.

24 BY MR. COOLEY:

25 Q Did another individual appear behind the person at the

1 raised hood, Vehicle Number 9?

2 A Yes, sir, there's somebody behind that raised hood on
3 Vehicle Number 9.

4 Q All right. Now did the individual that I pointed to---
5 Strike that. That was in a period of time, according to your
6 time count, after Shot Number - right after Shot Number 11
7 was fired; is that correct?

8 A Yes, sir.

9 Q All right.

10 MR. COOLEY: Now, Mr. Keith, if you would advance
11 the monitor to 12:28:05.

12 BY MR. COOLEY:

13 Q Calling your attention again to a particular portion of
14 the video monitor, Mr. Koenig, if you'd look right over at
15 the individual in the black jacket.

16 A Standing in the shadows west of 1700 Carver?

17 Q The individual with the black jacket that appears to
18 have a stick in his hand. If you look right over him, back
19 in that area.

20 MR. COOLEY: If we could run it forward at regular
21 speed.

22 Okay. If you could stop it.

23 BY MR. COOLEY:

24 Q Did you see any smoke in that area, Mr. Koenig, either
25 this time or at any time that you've watched the monitor?

1 THE COURT: I didn't hear that question.

2 MR. COOLEY: I wanted to know if he saw any smoke
3 or what appeared to be smoke in the area of that person, or
4 right over the top of that person with the black jacket.

5 A You mean right near the intersection of---

6 Q Yes.

7 A No, sir.

8 Q Okay.

9 MR. COOLEY: Can you back it up again, Mr. Keith,
10 at the point we were looking at?

11 BY MR. COOLEY:

12 Q If you look right under the placard, right over his
13 head, do you see it - if you watch in that area right there
14 on the left corner of the picture?

15 MR. COOLEY: Advance it slowly.

16 BY MR. COOLEY:

17 Q Do you see right above him, what appears to be a con-
18 figuration of smoke at this point?

19 A It doesn't look like smoke to me, but---

20 Q All right. Let me point it out to you. Yes, right
21 there (indicating).

22 A It looks like, to me, something moving very quickly.
23 It's just blurry through that section.

24 Q I see.

25 A But it's impossible to tell.

1 Q All right. Thank you very much.

2 MR. COOLEY: That's all the questions I have, Your
3 Honor.

4 MR. LINSIN: Your Honor, could counsel describe for
5 the record the area of that video still that he requested
6 Mr. Koenig to direct his attention to on this last - just on
7 this last occasion?

8 MR. COOLEY: Yes. Approximately 12:28:05 to
9 12:28:07. It is the far left portion of the video screen,
10 just above the area where there appears to be a fence post
11 and wire, and right over a person who is stooped down, in a
12 black jacket.

13 THE COURT: All right. Is that all the defense
14 has?

15 Do you have any redirect, Mr. Linsin?

16 MR. LINSIN: Yes, we do.

17 THE COURT: All right. Try to keep it brief.

18 REDIRECT EXAMINATION

19 BY MR. LINSIN:

20 Q Mr. Koenig, you were asked on cross examination yester-
21 day whether you had run the audio track of the Channel 12
22 videotape on your visicorder; and you indicated, I believe,
23 that you had not done so. Did you have occasion, Mr. Koenig,
24 to view and listen to that Channel 12 videotape before making
25 a decision as to whether or not you would analyze that

1 videotape?

2 A Yes, sir.

3 Q And what did you conclude about the value of that
4 videotape for the purposes of your analysis, and why did you
5 conclude that?

6 A There was no visual information of any help; and we - a
7 quick review didn't find anything that looked like a gunshot,
8 which really wasn't a problem since we had continuous tapes
9 on Channel 11 and most of it on Channel 2, which was high
10 quality.

11 Q You were also asked some questions yesterday, Mr. Koenig
12 about the error rate that you had calculated for the place-
13 ment of your gunshots, and I'm going to ask you, first of
14 all, to review again for the Court and for the members of the
15 jury what factors you took into account when you calculated
16 your error rate in the process of this examination.

17 MR. GREESON: If Your Honor please, he's testified
18 to this twice. We object simply to the repetition.

19 THE COURT: I'll sustain the objection. You've
20 been over that.

21 BY MR. LINSIN:

22 Q When Mr. Bost yesterday, Mr. Koenig, asked you to place
23 the stickers on the overlay to Defendants' Exhibit 2, I
24 believe, you indicated that that was the area of maximum
25 possible error rate, and I believe you were about to describe

1 what the probable error rate for your exam was. Would you
2 explain to the jury what the probable---

3 MR. GREESON: Objection to the leading, if Your
4 Honor please.

5 THE COURT: I'll permit the question.

6 A Well, I went down and took a lot of things into account.
7 The temperature - we set the temperature at 55 degrees for
8 the speed of sound, but just to be sure we made it plus or
9 minus five degrees. Second, we took into account any errors
10 with the video recorders that would have recorded the infor-
11 mation at the scene. We talked to the manufacturer on the
12 maximum error rate available. The maximum error rate
13 possible with the video recorder we played it back at
14 Quantico with.

15 MR. PORTER: Your Honor, I believe he's answering
16 the first question and it's already been sustained at this
17 point.

18 THE COURT: Well, I'll permit it. But just - the
19 purposes of redirect now is just not to have him repeat what
20 he said on direct. It's merely to develop anything that
21 might have been developed on cross. So let's remember that.
22 Don't have him repeat unnecessarily.

23 BY MR. LINSIN:

24 Q Mr. Koenig, what was the probable error rate of your
25 examination?

1 A Most of the gunshots, except for several like one and
2 two, the maximum error rate expected would be plus or minus
3 .55 feet. The maximum error possible, that's all the
4 machines went all in the wrong direction and had their maxi-
5 mum error, was plus or minus 1.81 feet.

6 Q Now you hadn't mentioned those figures yesterday. How
7 did you derive the maximum error rate as you indicated it in
8 your report of your examination?

9 A We normally at least doubled if not tripled maximum
10 possible error rate to take into account any deviations in
11 the chart or anything like that, just to be very conser-
12 vative. Some of the gunshots that occurred - there was one
13 set of gunshots occurring on the west side of 1700 Carver,
14 where you have three gunshots all within about three-quarters
15 of a second fired from the same position, and we could notice
16 that the gun barrel moved several inches between the
17 gunshots. That's how accurate the technique was. But again
18 we were very conservative and made a very wide error rate
19 determination.

20 MR. LINSIN: May I ask the witness to step down
21 briefly, Your Honor?

22 BY MR. LINSIN:

23 Q Mr. Koenig, I'm going to ask you to make reference to
24 D-10 and the overlay D-10j, which is currently covering the
25 diagram. I'm going to ask you also to take the rough

1 measuring guide that Mr. Greeson had provided to you yester-
2 day and, using this guide, sir, I would ask you to measure
3 the area of one of the dots that is currently on this
4 overlay.

5 A Yes, sir.

6 Q What is that measurement?

7 A It measures three feet.

8 Q Now given what you just testified to as the probable
9 error rate in your examination, do those dots cover the area
10 that would be included within the probable area rate for
11 most of the gunshots fired during this incident?

12 A No, sir. They would be quite a bit larger.

13 Q Would you resume the stand, please?

14 Now during your cross examination, Mr. Koenig,
15 Mr. Greeson had read from certain of your rough notes that
16 you had maintained during your examination, and specifically
17 read some comments about Shots 3, 4 and 5 and that in those
18 rough notes you indicated that those shots were probably -
19 probably fired from north of the intersection of Everitt and
20 Carver.

21 When you did your analysis, Mr. Koenig, did you make a
22 conclusion as to where Shots 3, 4 and 5 were located?

23 MR. GREESON: Objection. Asked and answered a
24 number of times.

25 THE COURT: I'll permit it. Go ahead.

1 A No, sir, because of lack of echoes. It was impossible
2 to make any determination of the exact location of the Gunshots
3 3, 4, and 5.

4 Q Why did you insert in your report a probable location
5 for those gunshots?

6 A I was asked by the Greensboro Police Department at the
7 time. I told them I didn't know where they were. They came
8 back and said, "In this basic area around Everitt and Carver,
9 could you tell us where you think probably---"

10 MR. COOLEY: Object to the hearsay, Your Honor.

11 THE COURT: Well, I'll permit it under the cir-
12 cumstances. Go ahead.

13 A They asked me where I thought it was probable they could
14 be in that little area, to help them in their investigation.
15 So on most of the areas, other than that area, just in the
16 general vicinity of Everitt and Carver, would have produced
17 echoes I would have seen. Therefore, the probable area, just
18 limiting myself to that, would have been in that area just
19 north of that intersection.

20 Q All right. Mr. Koenig, I'm going to show you now an
21 exhibit that has been marked as Defendants' Exhibit Number 1.
22 It's one to which you testified or about which you testified
23 yesterday. And my question to you, sir, is when you did your
24 analysis back at the laboratory in Washington, did you use a
25 chart similar or identical to the chart as contained on

1 Defendants' Exhibit 1?

2 A Yes, sir.

3 Q Did your chart go any further west than this chart when
4 you did your analysis?

5 A The chart itself went further, but we really didn't use
6 it because we didn't have any cars located on it or anything.

7 Q When you did your analysis, did you confine yourself to
8 the area depicted in the chart contained on Defendants'
9 Exhibit 1?

10 A Yes, sir.

11 ALL DEFENSE COUNSEL: Objection. Asked and
12 answered.

13 THE COURT: Well, I'll permit it.

14 MR. GREESON: Once again I object to the leading,
15 Your Honor. I asked him to let Mr. Koenig testify.

16 THE COURT: Well, a certain amount of leading is
17 permitted on redirect.

18 BY MR. LINSIN:

19 Q Mr. Koenig, Mr. Greeson also said yesterday, in the
20 course of one of his questions, that he had met with you on a
21 number of occasions and spoken to you before you testified at
22 the state trial, and had discussed your analysis in this
23 case. Now did Mr. Greeson or any of the other defense attor-
24 neys at the state trial inform you that - did they ever tell
25 you that a member of the Ku Klux Klan had fired shots further

1 west of Vehicle---

2 MR. GREESON: Objection to leading and to assuming
3 facts not in evidence.

4 MR. JENWINGS: There are parties here that weren't
5 even at the state trial.

6 THE COURT: I'll sustain the objection.

7 BY MR. LINSIN:

8 Q Were you ever asked, Mr. Koenig, by anyone, before you
9 took the stand at the state trial, to consider any area west
10 of Vehicle 11 in the process of your analysis?

11 A Actually, Vehicle - I can't tell the vehicle just west
12 of eleven.

13 Q Are you referring to D-10?

14 A Yes, sir. It looks like a green vehicle from here; I
15 can't read the number.

16 Q Is this the (indicating)---

17 A Yes, sir.

18 Q Am I pointing to the vehicle?

19 A Yes, sir.

20 Q May the record reflect the vehicle has the number "43" on
21 it?

22 And that would be the vehicle immediately to the west of
23 Vehicle 11, is that correct?

24 A Yes, sir.

25 Q Did you ever consider anything west of that?

1 A No, sir.

2 MR. GREESON: Mr. Linsin, I didn't use that; I just
3 marked it - Number 7 - for your use, Defendants' Number 7.

4 (The chart above referred
5 (to was marked for
6 (identification as:

7 (DEFENDANTS' EXHIBIT NO. 7.

8 MR. LINSIN: All right.

9 MR. GREESON: But we have not referred to it
10 previously.

11 MR. LINSIN: All right.

12 Your Honor, may the witness step down, please?

13 BY MR. LINSIN:

14 Q Mr. Koenig, if you could just stand in front of the jury
15 box there, I'd like you and the jury to see this at the same
16 time.

17 Now, Mr. Koenig, I'm going to ask you to refer to a
18 chart that has been marked Defendants' Exhibit Number 7, and
19 I'm going to ask you to look at that entire exhibit, Mr.
20 Koenig, and ask you if you recognize it?

21 A It looks like the exhibit that was probably used at the
22 state trial; however, a lot of the stuff that was on the
23 exhibit looks like it's been whited out or something.

24 Q Directing your attention to the two rectangular areas
25 that appear on this, do you recognize those rectangular
areas?

1 A Yes, sir. I had my signature on there.

2 Q Would you point out to the members of the jury where
3 your signature is?

4 A (Indicating.)

5 Q And what did those drawings represent?

6 A The probable area where Gunshots Number 3, 4, and 5
7 occurred.

8 Q According to your testimony at the state trial?

9 A Yes, sir.

10 Q Now I ask you to come down to this, which would be the
11 west end of this exhibit, and I ask you when you testified at
12 the state trial, were you asked to consider this entire exhi-
13 bit or was a portion of this exhibit folded under?

14 MR. GREESON: Object to the leading, Your Honor.
15 He can testify about the exhibit if he knows.

16 MR. LINSIN: All right.

17 THE COURT: All right. Rephrase it.

18 BY MR. LINSIN:

19 Q Were you asked to consider this entire exhibit, Mr.
20 Koenig?

21 A No, sir.

22 Q What portion were you not asked to consider?

23 A The portion right---

24 MR. JENNINGS: Object. There's been no testimony
25 he was asked not to consider anything.

1 THE COURT: You better rephrase that.

2 BY MR. LINSIN:

3 Q What portion were you asked to consider, Mr. Koenig?

4 A I was asked to consider from this point here. It looks
5 like a tape where it was maybe possibly folded.

6 MR. GREESON: I object to what it looks like,
7 unless he knows.

8 A It was from this position.

9 THE COURT: It was from that position?

10 THE WITNESS: From that position down to the far
11 end down here.

12 BY MR. LINSIN:

13 Q Now do I understand that you're indicating---
14 Mr. Koenig, having now folded this exhibit slightly to the
15 west of Vehicle 11, Vehicle 43 not being depicted on this
16 chart---

17 MR. JENNINGS: Object to his testifying, if Your
18 Honor please.

19 THE COURT: That's all right. Go ahead.

20 BY MR. LINSIN:

21 Q ---is this the area you were asked to consider during
22 the state trial?

23 A Yes, sir.

24 Q And is this the area that formed the basis of your
25 opinion that the Shots 3, 4, and 5 probably occurred in that

1 square?

2 A Yes, sir.

3 BY MR. LINSIN:

4 Q Now also during your testimony on cross examination
5 yesterday, Mr. Koenig, you were asked about a certain portion
6 of your testimony at the state trial that appeared at Pages
7 44 and 45. And I again ask you to step down and refer to
8 Government's Exhibit D-10. This is the testimony appearing
9 at Pages 44 and 45, Mr. Koenig. It concerns your statement
10 as to the 99 percent probability that the shots occurred
11 north of the intersection.

12 MR. GREESON: Objection to the leading, Your Honor.

13 THE COURT: Well, it's redirect. He can call his
14 attention to his prior testimony in this matter, so
15 overruled.

16 BY MR. LINSIN:

17 Q You were read the following questions and answers by
18 Mr. Greeson yesterday.

19 "So that one percent would be the only - the only
20 possibility would be near Number 2?" Question.

21 Answer: "Down below it, yes."

22 "I'm going to ask you---"

23 And then he proceeded in the state trial to indicate
24 where he meant by "down below it."

25 MR. GREESON: Objection to the leading, Your Honor.

1 THE COURT: You may proceed.

2 BY MR. LINSIN:

3 Q I ask you now, Mr. Koenig, to step forward to D-10 and
4 to tell this jury where you meant when you said there was a
5 one percent possibility that the shot could have occurred
6 down below Shot Number 2.

7 MR. GREESON: Objection to the leading, and objec-
8 tion to the question, because he already said what he meant
9 and he showed it to them.

10 THE COURT: Well, I'll permit it. Go ahead.

11 A This area south of Gunshot Number 2, down here
12 (indicating).

13 BY MR. LINSIN:

14 Q You were not referring to down the street, Mr. Koenig?

15 A No, sir.

16 MR. GREESON: Object to the leading, Your Honor.

17 THE COURT: I think it's proper on redirect to lead
18 occasionally.

19 BY MR. LINSIN:

20 Q Mr. Koenig, if you had been told prior to your testimony
21 at the state trial that additional shots had been fired or
22 that there was the possibility of additional shots fired---

23 MR. GREESON: Objection to the implication of this
24 question, Your Honor. He's trying to put facts that are not
25 into evidence into the case at this time.

1 THE COURT: Let's hear the question.

2 BY MR. LINSIN:

3 Q All right. If you had been told that there was a possi-
4 bility that shots had been fired west of Vehicle 43, what
5 effect would that have had on your analysis?

6 ALL DEFENSE COUNSEL: Objection, Your Honor..

7 MR. KEITH: He said he's an expert, he can place the
8 shots. What difference does it make who told him that they
9 were shots?

10 MR. LINSIN: Your Honor - if Your Honor please, .
11 there has been some dispute as to what Mr. Koenig did and did
12 not consider in the course of his analysis. I believe it
13 proper to inquire what he might have considered had he been
14 given available information.

15 MR. GREESON: Well, Your Honor, he has explained
16 very carefully all the things that he considered and one of
17 them was that he did not consider witnesses' testimony.

18 THE COURT: I'll sustain the objection. All right.

19 BY MR. LINSIN:

20 Q Mr. Koenig, if I asked you today to consider all of the
21 area of D-10, are you today, sir, 99 percent certain that
22 Shots 3, 4, and 5 would have occurred just north of the
23 intersection of Everitt and Carver?

24 A No, sir.

25 Q Where do you believe it probable that Shots 3, 4, and 5

1 could have occurred?

2 A Again I'd have to include this area just north of the
3 intersection of Everitt and Carver. And the other major area
4 and there's small areas - would be down in this area west on
5 Everitt, down probably around - beyond Gunshot 39 - Vehicle
6 39 and west of that.

7 Q Would you again for the record describe that area to the
8 west - describe the parameters of that area, just so the
9 record is clear, Mr. Koenig? And I don't mean to tie you
10 down with precision, but the general parameters of that area.

11 A Well, the area would be somewhat irregular, because one
12 of the buildings you can look at for major echo is here
13 (indicating), so if the microphone was here and you went
14 there, at that angle, you'd have to come across at the same
15 angle, and you'd get a little bit of leeway usually on the
16 edge of corners. Sometimes you pick echoes up that are
17 just kind of refracting off the corner, so you get down in an
18 area that gets kind of slanted, like up in this area
19 (indicating). So it's not a perfect rectangle, but it goes
20 over an area maybe as close down as Vehicles 40 and 41 in
21 some parts. It goes below Vehicles 40 - 39 and 48, south of
22 Everitt, down in this area (indicating).

23 Q Could you resume the stand?

24 You were also asked yesterday, Mr. Koenig, about certain
25 portions of your grand jury testimony. But in the process of

1 the questioning yesterday you were only read a portion of the
2 question and answer, and I would like to ask if you remember
3 being asked this question and giving this entire answer
4 during the course of your grand jury testimony.

5 Question: "When you did your analysis---"

6 MR. GREESON: You're referring to the---

7 MR. LINSIN: Page thirty--- Sorry, Mr. Greeson.

8 Page 34 and 35 of Mr. Koenig's grand jury testimony.

9 BY MR. LINSIN:

10 Q Question: "When you did your analysis, did you
11 take into account the statement of any witness to
12 locate the position of a shot?"

13 Answer: "No, I didn't. It is totally independent
14 to any other evidence, other than what I talked
15 about. One thing I like about forensic evidence
16 is, you know, it should be separate from what wit-
17 nesses say, that is, separate evidence, you know.
18 My concern never was who fired or who didn't fire
19 anything. Mine is to figure out how many shots
20 there were, who was firing up there, no matter what,
21 and resolve that, independent of what people
22 remember, the scene or any other evidence. And
23 that has caused problems, in that other evidence
24 seemed to contradict what I said at first."

25 MR. PORTER: Objection, Your Honor, at this point

1 to what other evidence. It's hearsay again.

2 THE COURT: I'll permit it. Go ahead.

3 BY MR. LINSIN:

4 Q "---other evidence seemed to contradict what I said
5 at first, but this is a very accurate exam. I'm a
6 very conservative person. And if I wasn't very,
7 very sure of what I said, I wouldn't say it. I'd
8 say, 'Gee, I can't tell them that one.' I mean,
9 sometimes you've got to say that. You've got to be
10 realistic and say, I don't know or I can't deter-
11 mine, it can't be determined. And that's why it
12 took me nine months to do this case.
13 That's not a normal thing to work nine months on a
14 particular case. You figure something even as
15 complex as Air Florida exams were, I spent maybe a
16 month on, to give you an idea. I mean, this took
17 more time than any exam our group has ever worked
18 on to do."

19 Do you recall, sir, being asked that question and giving
20 that entire answer at the grand jury?

21 A Yes, sir.

22 MR. LINSIN: Your Honor, I will have just a few
23 additional questions, but I would request a brief recess at
24 this point to collect those questions for Mr. Koenig.

25 THE COURT: They'll just be a few more questions?

1 MR. LINSIN: Yes, sir.

2 THE COURT: All right. We'll take our mid-morning
3 recess. Don't discuss the case.

4 (Recess at 10:45 A.M., until 11:15 A.M.)

5 THE COURT: I want to say this at this point in
6 time. It has nothing to do with the testimony of this wit-
7 ness. But I have signed the order immunizing Mark Sherer,
8 and I have had the Clerk's office get in touch with the
9 Magistrate at Greensboro and delayed that proceeding over
10 there. I see no reason to allow that to interrupt this
11 trial. So Mark Sherer, if the government sees fit, will be
12 called as the next witness, and I'll have him come in out of
13 the presence of the jury initially and advise him of the
14 immunity order. But he will be the next witness if you want
15 to call him.

16 MR. BELL: Thank you, Your Honor.

17 THE COURT: All right.

18 MR. LINSIN: We need the jury to come back in.

19 THE COURT: Oh, yes. Bring the jury, please.

20 MR. BELL: Your Honor, I would assume that
21 Mr. Sherer will claim his privilege before the order becomes
22 effective?

23 THE COURT: Well, that's stated in the order, but I
24 think I should have him in out of the presence of the jury
25 preliminarily, and I intend to do that.

1 MR. BELL: Yes, sir.

2 THE COURT: All right.

3 (Jury in at 11:20 A.M.)

4 BY MR. LINSIN:

5 Q Mr. Koenig, you were asked certain questions this
6 morning concerning certain of the frames on both the
7 Channel 11 and the Channel 2 videotapes about this blue-over-
8 white pickup truck. And my first question to you, sir about
9 that pickup truck is as follows. You were referred - for the
10 purposes of the record it was on the Channel 11 tape at
11 eleven minutes, forty-five seconds, and fifteen-thirtieths of
12 a second. But it was the frame where you saw the individual
13 leaning out of the side of the pickup truck and appeared to
14 be holding something in his hand. Do you recall that frame,
15 Mr. Koenig?

16 A Yes, sir.

17 Q Now in the course of your analysis, did you determine
18 whether or not that pickup truck had moved between the time
19 the first gunshot was fired and the time that you actually
20 see him on the Channel 11 videotape?

21 MR. GREESON: Objection.

22 THE COURT: I'll permit it. Go ahead.

23 A Yes, sir, it did move.

24 BY MR. LINSIN:

25 Q And in which direction had that pickup moved, sir?

1 A It moved west on Everitt Street.

2 Q So when you see this blue-over-white pickup on the
3 Channel 11 videotape, did your analysis indicate that it is
4 actually west of where Shot Number 1 is marked on D-10j?

5 A Yes, sir. The pickup truck continues to move. You see
6 it later. It's considerably--- Well, not considerably, but
7 certainly beyond - west of the bus somewhere.

8 Q All right. Now you were also asked some other questions
9 about what you did or did not see in certain subsequent frames
10 on Channel 11 and Channel 2 concerning this blue-over-white
11 pickup. I ask you, first of all, did you conduct any analy-
12 sis in the course of your entire examination as to those
13 frames that you were referred to this morning?

14 A No, sir.

15 Q And when you testified this morning about what you did
16 or did not see on those frames, how definite was your view on
17 what you were seeing on those frames?

18 MR. GREESON: I'll object to that, Your Honor. The
19 jury is perfectly capable of determining, you know, what his
20 opinion was and what he said. This is a very self-serving,
21 leading question that I object to strenuously.

22 THE COURT: I'll permit this question. Go ahead.

23 BY MR. LINSIN:

24 Q How definite was that opinion, Mr. Koenig?

25 A Well, I tried to be as informative as possible. But as

1 we discussed in that testimony, it was very difficult at
2 times to see things and know exactly what they were, but, you
3 know, several of the frames it was pretty obvious that it was
4 a pickup truck and other frames I was shown it was very
5 difficult to see. There was something there, but it was dif-
6 ficult to say exactly what it was.

7 Q Okay.

8 MR. LINSIN: I just have one more group of
9 questions, Your Honor. I request the jury view just two por-
10 tions of the Channel 11 videotape.

11 For the record, we are looking at 12:21:03 on the
12 Channel 11 tape, and I would ask Mr. Brereton to just move it
13 forward slowly from this point.

14 (Whereupon, a portion of the Channel 11 videotape
15 was viewed.)

16 BY MR. LINSIN:

17 Q Now we have frozen at 12:22:12. I would ask you,
18 Mr. Koenig, do you see any smoke in this frame?

19 A Yes, sir.

20 Q Now would you state again the time at which you
21 concluded Shot Number 19 was fired on the Channel 11
22 videotape?

23 A 12:22:14.

24 Q And that would be after the scene - two-thirtieths of a
25 second anyhow, after the frame we're viewing on the video-

1 tape; is that correct?

2 A Yes, sir.

3 Q Now, Mr. Koenig, would you explain why it is in this
4 videotape we see the smoke coming out of the gun before the
5 time that you reported as Shot Number 19 having been fired?

6 A Yes, sir. It was back to my analogies I talked about,
7 somebody cutting wood down the street and you see him chop
8 it, the axe is coming back out and you hear the sound. For
9 instance, on this case the person is about 85 feet away and
10 it took two-thirtieths of a second or a fifteenth of a second
11 that would be approximately the speed of sound - to go across
12 the street at 1,113 feet per second. In other words, the
13 gunshot occurs before the sound reaches the microphone
14 because the speed of sound is at a certain speed.

15 Q And the time at which, in your report, you've indicated
16 that a gunshot has occurred, does that time indicate the time
17 the bullet has exploded, the bullet or the shotgun shell has
18 exploded, or does it indicate the time when the sound from
19 that shot has arrived at the microphone?

20 A It's the time the sound arrives - the gunshot blast
21 arrives at the microphone.

22 Q All right, sir.

23 MR. LINSIN: Now if Mr. Brereton could advance it
24 to about 12:28. Okay. For the record, we have advanced it
25 to 12:28:01, and again, before we move this forward---

1 BY MR. LINSIN:

2 Q Mr. Koenig, what time did you conclude that Shot Number
3 25 was fired?

4 A 12:30:05.

5 Q And with regard to that shot, Mr. Koenig, did you make
6 any conclusion as to whether that shot was subsonic or
7 supersonic?

8 A It's probably supersonic.

9 MR. LINSIN: Now if you could just run it through
10 12:30:05, Mr. Brereton.

11 BY MR. LINSIN:

12 Q Now is this the time, as indicated in your report, when
13 the sound of the 25th shot arrived at the microphone, sir?

14 A Yes, sir.

15 Q Given that Shot 25 was probably supersonic, Mr. Koenig,
16 if this individual that you were discussing this morning, the
17 individual that had turned in the - well, he's now visible in
18 the frame. I believe you identified him as Mr. Flowers, this
19 morning, on the video board. And given that the Shot 25 was
20 probably supersonic, would the projectile that was fired from
21 that weapon have struck Mr. Flowers before the time that the
22 sound of that gunshot arrived at the camera?

23 A Yes, sir.

24 Q And why is that, Mr. Koenig? Would you explain that?

25 A Well, the distance between the microphone and the gun

1 going off, first off, is much longer than the distance
2 between the gun and Mr. Flowers. I don't--- If that's what
3 you're aiming at. That distance is much shorter.

4 Second, the bullet would travel between the gun and that
5 position quicker, because it's traveling faster than the
6 speed of sound.

7 MR. LINSIN: The United States has no further
8 questions, Your Honor.

9 THE COURT: All right. Any brief redirect -
10 recross?

11 MR. GREESON: Yes, Your Honor.

12 THE COURT: All right.

13 RE CROSS EXAMINATION

14 BY MR. GREESON:

15 Q Mr. Koenig, this passage that Mr. Linsin read to you on
16 redirect contains the following statement by you, does it
17 not?

18 "My concern never was---"

19 MR. LINSIN: May counsel have the page reference,
20 please?

21 THE COURT: Which page, sir?

22 MR. GREESON: Page 34. I thought you had it; I'm
23 sorry. It's the same one you read.

24 BY MR. GREESON:

25 Q "My concern never was who fired or who didn't fire

1 anything. Mine is to figure out how many shots
2 there were, who was firing up there, no matter
3 what, and resolve that, independent of what people
4 remember, the scene or any other evidence. And that
5 has caused problems, that other evidence seemed to
6 contradict what I said at first. But this is a
7 very accurate exam. I'm a very conservative per-
8 son. And if I wasn't very, very sure of what I
9 said, I wouldn't say it.

10 You said that, didn't you?

11 A Yes, sir.

12 Q And the contradiction that the government is talking
13 about now is exactly what you were talking about in that
14 statement, wasn't it, the contradiction between your opinion
15 and some other witness's testimony?

16 A I don't know the reasons for the government asking me
17 the questions.

18 MR. LINSIN: Your Honor, we're going to object to
19 counsel's characterization of the witness's testimony. The
20 testimony speaks for itself.

21 MR. GREESON: Well, I'll accept that, Your Honor.

22 THE COURT: All right.

23 BY MR. GREESON:

24 Q Mr. Koenig, I'm going to hand you what has been
25 marked---

1 MR. GREESON: I've marked it as Defendants' Exhibit
2 Number 8.

3 (The document above
4 (referred to was marked
5 (for identification as:

6 (DEFENDANTS' EXHIBIT NO. 8.

7 MR. LINSIN: Your Honor, may we approach the bench,
8 please?

9 THE COURT: All right.

10 (Bench conference on the record.)

11 THE COURT: All right.

12 MR. LINSIN: Your Honor, Mr. Greeson has just shown
13 us an exhibit marked Defendants' 8. It appears to be an ace-
14 tate overlay that was utilized during the state trial,
15 apparently covering some other diagram or chart. In the
16 absence of some proffer from counsel that he intends to place
17 that over the chart that was utilized in the state trial, I
18 would object to it as being misleading and potentially preju-
19 dicial.

20 THE COURT: What's your proffer?

21 MR. GREESON: My proffer is going to be, "Can you
22 identify this, Mr. Koenig?" He will say, "Yes, I made it."
23 "What did you use it for?" I don't even care what he used it
24 for. It contains some shots. I'm going to put it up on this
25 chart, and I'll ask him if it's the same scale, and ask him
if those shots are in the right place. And he'll say no,

1 because it's a different scale, and so forth. It's simply to
2 redirect on what Mr. Linsin just---

3 THE COURT: But if it doesn't tie into the chart
4 you're going to put it on as an overlay, what does it show?

5 MR. GREESON: Well, we have one here that it can go
6 on that is the right size.

7 THE COURT: Well, why don't you put it on it? It
8 seems to me it doesn't mean anything if you put an overlay on
9 an underlying chart which isn't drawn to scale.

10 MR. GREESON: Well, it will in this case, Judge. I
11 mean, all I can tell you is that he put the dots on there, he
12 placed the cars. He'll testify to what scale it is and that
13 it's different from this map.

14 THE COURT: It seems to me you ought to use the
15 chart that was used in connection with it at the state trial.

16 MR. GREESON: Well, it's kind of cumbersome, but---

17 THE COURT: That's your objection?

18 MR. LINSIN: Precisely, Your Honor.

19 MR. GREESON: I've been asking him for that chart,
20 by the way, for the last week and they can't locate it.

21 THE COURT: Is it here now?

22 MR. LINSIN: Mr. Greeson, this is---

23 Your Honor, this is the first I have heard of this
24 from Mr. Greeson.

25 MR. GREESON: Oh, I've been talking to Mr.

1 Brereton. I didn't mean I'd been talking to you.

2 THE COURT: Well, is it here?

3 MR. LINSIN: Your Honor, I'm still not sure what
4 chart Mr. Greeson is referring to.

5 THE COURT: Well, do you merely want him to iden-
6 tify this overlay?

7 MR. LINSIN: Yes, Your Honor.

8 THE COURT: But unless you have the underlying
9 correct chart, I don't think you can use it. You have him
10 merely identify it, if that'll show anything.

11 MR. JENNINGS: There are a good many things marked
12 on the overlay, and it seems he could use it.

13 MR. GREESON: We'll put up this chart that is the
14 right size and let him put it over that.

15 THE COURT: You can do that.

16 MR. HALL: If it matches one of the exhibits,
17 wouldn't it be sufficient?

18 THE COURT: Well, your point is, it doesn't make
19 much sense unless the underlying chart coincides with the
20 overlay.

21 MR. LINSIN: My point is, Your Honor, precisely
22 that, that it would, as with the overlay, utilized by counsel
23 yesterday - it could potentially be very misleading to the
24 jury - put one overlay over a different chart when it con-
25 tains information relating to---

1 THE COURT: Yes. I think there's some merit to
2 this. I think you better get the---

3 MR. GREESON: Well, I'll put the chart up.

4 THE COURT: All right.

5 MR. GREESON: You mean, they've introduced it - the
6 one into evidence at the same scale?

7 THE COURT: Oh; do we have one at the same scale?

8 MR. LINSIN: Your Honor, I must again say to the
9 Court, I don't know the scale of this chart. I am not cer-
10 tain what chart this overlay covers.

11 THE COURT: Well, he can testify whether it matches
12 this one - the witness?

13 MR. LINSIN: I would presume so.

14 THE COURT: All right. Well, why don't you---

15 MR. GREESON: That's all I want. I'm going to make
16 a foundation.

17 THE COURT: All right. Okay.

18 (End of bench conference.)

19 MR. GREESON: May we have just a moment, Your
20 Honor?

21 THE COURT: All right.

22 MR. LINSIN: Your Honor, with the Court's
23 indulgence, I would again request that we approach the bench.

24 THE COURT: All right.

25 (Bench conference on the record.)

1 MR. LINSIN: Your Honor, I am informed by
2 Mr. Brereton that he informed Mr. Greeson this morning that
3 the chart that was used with this overlay, Defendants' 8, was
4 provided to Mr. Greeson this morning and is presently sitting
5 in his office. And I would request that if he intends to
6 show this to the witness, that the same chart which it
7 covered during the state trial be utilized in the examination
8 of this witness.

9 MR. GREESON: Your Honor, I think Mr. Linsin is
10 mistaken, because if Mr. Brereton said he gave me anything
11 this morning, it's a lie. I got to court and everybody was
12 already in the courtroom. I was late this morning. There
13 hasn't anybody given me anything and, if it's back there in
14 my office, I sure haven't seen it, and I'd like the oppor-
15 tunity to go look.

16 THE COURT: Well---

17 MR. GREESON: I'd love to have it. It won't take
18 but a second.

19 THE COURT: Well, go ahead. We'll wait.

20 (End of bench conference.)

21 THE COURT: We're going to wait a few minutes,
22 ladies and gentlemen. Counsel wants to step across the hall
23 and get an exhibit.

24 BY MR. GREESON:

25 Q Mr. Koenig, does this refresh your recollection about

1 that chart I was asking you about yesterday, this one that is
2 marked now as Defendants' Exhibit Number 9 - that I was
3 asking you if you didn't use to mark the shots in the state
4 trial?

5 (The chart above referred
6 to was marked for
7 identification as:

8 (DEFENDANTS' EXHIBIT NO. 9.

9 A That was at the state trial, but I - my recollection is
10 I never used that exhibit; I just remember seeing it there.

11 BY MR. GREESON:

12 Q All right, sir. Let me show you what has been marked as
13 Defendants' Exhibit Number 8, and ask you if you would iden-
14 tify that.

15 A It looks like the overlay I used in the state case, but
16 I won't swear to that.

17 Q Do you see the grease pencil marks on it that appear to
18 be vehicles with vehicle numbers on them?

19 A Yes, sir.

20 Q Did you make those marks?

21 A No, sir.

22 Q Is this not the overlay that you used up in Washington
23 at FBI headquarters---

24 A No, sir.

25 Q ---yourself?

A No, sir, I never used an acetate overlay.

1 Q All right. But you recognize this as what appears to be
2 what you used in the state trial?

3 A Yes, sir, that's what it appears to be.

4 Q All right, sir. And you recognize State's Exhibit -
5 I mean, excuse me - Defendants' Exhibit Number 9 here as
6 being in the courtroom at that time?

7 A Yes; but the overlay was not on that - at least when I
8 was there.

9 Q This overlay was never on that chart?

10 A Not when I was there.

11 Q You deny that you stood right in front of that chart and
12 placed these stickers over this chart?

13 A My recollection was that it was a different chart behind
14 me in the courtroom; but that's just to the best of my
15 recollection, that's a number of years ago.

16 Q A different chart than this?

17 A Yeah. It was a chart, but I think it was the one that
18 was shown me earlier that was folded down on the left side.
19 I guess it included the same information, basically. As I
20 say, that's my best recollection.

21 Q Okay. So you would deny then that this is your work
22 (indicating), and that that was the chart that you used; is
23 that correct?

24 A Well, I said the chart looks like the one I used - the
25 overlay here. But my best recollection is that I used a

1 chart--- I think I've been shown a chart like that - a
2 smaller chart on--- My recollection is, it was a smaller
3 chart that was used, that I used at the trial. But that's
4 again just my best recollection; it's been well over three
5 years.

6 Q All right, sir.

7 MR. LINSIN: Your Honor, at this point I would
8 object, in the absence of some foundation that this witness
9 has some knowledge as to what is about to be displayed to the
10 jury.

11 THE COURT: Well, I presume counsel is still about
12 trying to refresh his recollection.

13 MR. GREESON: Yes, Your Honor.

14 THE COURT: You may proceed.

15 BY MR. GREESON:

16 Q Mr. Koenig, would you step down here and examine this
17 chart and tell me if it's the same or similar to any charts
18 that you've seen here in this trial?

19 A It's similar to some of the other charts, that's
20 correct.

21 Q And do you recognize a scale to it?

22 A It looks like a one inch to five foot; yes, one inch to
23 five feet.

24 Q All right, sir. Could you use this diagram to
25 illustrate your testimony in this case?

1 A Yes, sir.

2 Q And do you recognize this overlay as being the one you
3 used?

4 A To the best of my recollection.

5 Q All right, sir. And would you hold it up here for me and
6 let's see if it's the same scale, in your opinion.

7 A Well, it's not perfect. I mean, it's off. You know,
8 they must have used it on a different graph. The scale must
9 have got off slightly on this one. You can see the two marks
10 that have to match up, here and here (indicating), don't
11 match up.

12 This is also off down here; it's got the car up on the
13 curb.

14 Q Down where?

15 A Right here (indicating). You can line these up, but the
16 car is still off; that would almost determine that this
17 couldn't have been the one that I used because it doesn't
18 match up.

19 MR. LINSIN: Your Honor, at this point, based on
20 the witness's testimony, I'm going to renew my objection to
21 this overlay being used in conjunction with this chart. The
22 witness has testified it is not to scale with this chart and
23 that he - his recollection is that he did not testify at the
24 state trial concerning this overlay in relation to this
25 chart.

1 MR. GREESON: I'm going to ask him about another
2 chart, Your Honor, and that's the only reason I'm putting it
3 up.

4 THE COURT: All right. We'll let counsel proceed.
5 I'll hold your objection in abeyance for a minute.

6 BY MR. GREESON:

7 Q Did I ask you, do you recall whether this diagram was
8 there in court, whether you used it or not for this par-
9 ticular purpose?

10 A Mr. Greeson, I remember seeing it. And my recollection
11 would have been at the state case, but I have no recollection
12 of myself using it. I think I saw it.

13 Q All right, sir.

14 MR. GREESON: Excuse me just a minute; I want to
15 get one thing.

16 BY MR. GREESON:

17 Q Mr. Koenig, while I'm looking for this other map, is
18 that a standard quarter-inch ruler?

19 A Yes, sir.

20 Q That's the only standard measurement I have. If you
21 would, using the scale one inch equals five feet, measure
22 from the point at this intersection down to here, so that you
23 can tell me how far this map goes in feet.

24 A From the middle of the intersection to---

25 Q Well, you can use the corner of the One-SB apartments'

1 where this arrow is, if you want to. That would be
2 sufficient.

3 A Well, it's about 73 inches times five feet.

4 MR. LINSIN: Your Honor?

5 THE COURT: Yes.

6 MR. LINSIN: Again, I must object. Counsel now
7 appears to be attempting to rely on a purported scale for
8 this underlying chart. There's been absolutely no establish-
9 ment by Mr. Greeson that this chart is to scale. He's now
10 asking the witness to make specific calculations based on a
11 purported scale for which there is no foundation. I believe
12 this is all misleading to the jury, Your Honor.

13 THE COURT: Well, he hasn't said anything yet, by
14 way of an opinion.

15 You're attempting to lay the foundation for some
16 questions?

17 MR. GREESON: Yes, Your Honor, and I asked him if
18 he could identify the scale, and he did. One inch equals
19 five feet.

20 THE COURT: Well, let's wait until he asks the key
21 questions. He hasn't done that yet.

22 BY MR. GREESON:

23 Q All right, Mr. Koenig. When you testified at the state
24 trial, Mr. Wall conducted the initial direct examination; did
25 he not?

1 A Yes, sir.

2 Q And you recall testifying at that time, don't you?

3 A Yes, sir.

4 Q And I'll ask if at that time Mr. Wall asked you the
5 following question:

6 "Mr. Koenig, I direct your attention to the diagram
7 which has previously been marked State's Exhibit
8 Number 1. I believe you identified that earlier,
9 that you were familiar with State's Exhibit
10 Number 1."

11 And you answered, "Yes, sir."

12 A I don't remember the particular number. I could have
13 said that, sir.

14 MR. LINSIN: Your Honor, could counsel give us a
15 page reference?

16 MR. GREESON: Yes. Page 15 of the state court
17 testimony.

18 BY MR. GREESON:

19 Q And then Mr. Wall asked you the following question:

20 "Now you made an overlay which you have used in
21 connection with State's Exhibit Number 1."

22 And you answered, "Yes, sir. The overlay of the
23 cars was actually made by our photographic group."

24 A Yes, sir.

25 Q Do you recall that question and answer?

1 A Yes, sir.

2 Q And then he asked you the question:

3 "For the purpose of the record, will you describe
4 what that overlay is, as to substance? Is it a
5 plastic material?"

6 And you answered, "Clear plastic acetate."

7 Is that correct?

8 A Yes, sir.

9 Q Is this clear plastic acetate?

10 A It probably used to be clearer than it is now.

11 Q All right, sir. I'll ask you, if you look down here on
12 the right of this large exhibit - the chart - and see if it
13 is identified as to exhibit and number.

14 A It's State Exhibit 1.

15 Q All right, sir. Then the question:

16 "Now would you please take this marker, and I refer
17 you to the vehicles that are marked."

18 And then Mr. Wall said, "Before that, let me have
19 that overlay marked, Judge. I'd like that labeled
20 as Defendant Matthews' Exhibit 1. Let the record
21 show that is a plastic overlay."

22 Mr. Koenig, do you see any identification number down
23 here that might say, "Defendant Matthews' Exhibit 1"?

24 A Yes, sir.

25 Q Does that refresh your recollection as to whether or not

1 this is the plastic overlay and the chart that you used to
2 illustrate your testimony in the state trial?

3 A The overlay, yes. My recollection - again, it could be
4 incorrect - was that we used one of those other charts that
5 was here previously, the same type of scale.

6 Q Can you use this overlay now to illustrate your
7 testimony?

8 A Yes, sir. The scale is off slightly, maybe from
9 stretching in time.

10 Q But this is the one that was made by your photographic
11 group up in Washington, wasn't it?

12 A Yes, sir. But, I say, acetate will stretch with time.

13 Q All right. So that explains why it might be not com-
14 pletely accurate at this time. How far off is that?

15 A It's not very much..

16 Q About a sixteenth of an inch, maybe an eighth?

17 A An eighth of an inch over what, four feet?

18 Q Yes, sir. That's not a very big percentage of error, is
19 it?

20 A Well, it's enough, like I said, to move some of the
21 vehicles right along in there.

22 Q Now when you were considering---

23 MR. LINSIN: Your Honor, I will renew my objection
24 at this point. The witness has again indicated that there
25 are discrepancies between the scale of this overlay and the

1 underlying chart. The witness has also testified that it is
2 his recollection that he utilized this overlay in connection
3 with another chart.

4 THE COURT: Yes. But his previous testimony indi-
5 cated that State's Exhibit 1-- and this is apparently State's
6 Exhibit 1 - was the underlying chart. And hasn't the witness
7 said that in any event he can testify now, using these
8 exhibits. Is that correct, Mr. Koenig?

9 THE WITNESS: Yes, Your Honor.

10 THE COURT: Well, he says he can do it, so - he's the
11 expert. Your objection is overruled.

12 BY MR. GREESON:

13 Q Now, Mr. Koenig, from your measurements that you took
14 just a moment ago, how far down the street, west on Everitt,
15 does this chart go?

16 A I don't know. You took my calculator with the number in
17 it.

18 Q I'm sorry. Do you recall what you calculated it from?
19 Was it seventy-three times five?

20 A Yes, sir. Three hundred and sixty-five feet.

21 Q Three hundred and sixty-five feet; all right, sir.

22 And in your testimony previously you placed three, four,
23 and five on this overlay, didn't you?

24 A Yes, sir.

25 Q And I see that you placed them right here north on

1 Carver Court?

2 A Yes, sir.

3 Q And those are not exact locations, are they?

4 A I don't know the exact locations.

5 Q They were just placed there because of this square that
6 you drew previously?

7 A Yes, sir.

8 Q And you said they could come within--- And this falls
9 within that area, doesn't it?

10 A Yes, sir.

11 Q Let me hand you a grease pencil and ask you to draw that
12 same configuration on this. First of all, if you would, in
13 black draw the larger of the rectangles that has the point on
14 top.

15 All right, sir. And with the red pencil, draw the
16 smaller rectangle.

17 All right, sir. Do you want to go over that one more
18 time with each pencil, just so it will show up better?

19 Thank you, sir. You didn't have any visual information
20 whatever to assist you in this area, at the time the shots
21 were fired, did you?

22 A Shots 3, 4, and 5?

23 Q Yes, sir.

24 A No, sir.

25 Q You had some visual information perhaps immediately

1 thereafter of some people that you saw down here?

2 A I don't remember. There was just no visual information
3 concerning those shots.

4 Q Well, within several seconds thereafter, though, you
5 some people down here who you identified - the bearded white
6 male?

7 A Oh, yes. Yes, sir.

8 Q The fellow with the long, shoulder-length hair, the
9 fellow with the blue-jean jacket outfit, the fellow with a
10 baseball cap, maybe, I recall?

11 A Yes.

12 Q But when you saw those people, you never saw any of
13 those people up here, did you (indicating)?

14 A No, sir.

15 MR. GREESON: I don't believe I have any further
16 questions.

17 THE COURT: All right. Any further questions?

18 MR. BOST: Your Honor, I have a couple.

19 THE COURT: Don't repeat yourself now; just keep it
20 short, because I think it's tending to get a little repeti-
21 tious now.

22 MR. BOST: It concerns a matter brought up on
23 redirect.

24 THE COURT: All right.

25 BY MR. BOST:

1 Q Mr. Koenig, you said that your chart did not really
2 reflect the actual time the shell was fired in these guns,
3 but reflects the time that the sound got to the mike; is that
4 correct?

5 A Yes, sir. It could be resolved exactly - the time, if
6 you just made the computations.

7 Q Now on Shot 25, I believe your testimony was that the
8 sound - your chart shows that the shot was fired at 12:40:05,
9 but your testimony I believe now is that it was a little
10 before that?

11 A Well, it would be before. You've got to remember, video
12 times are never exact, because you're talking frames, you
13 know. A video is broken into 30 frames per second. My audio
14 times are going to be a lot more accurate from the time of
15 the first gunshot, because the sound track is continuous.

16 Q Okay. But on your chart you concluded that 12:30:05 is
17 the time the sound got to the mike, right?

18 A Yes, sir. The gunshot always takes some period of time
19 to go from where it occurs to the microphone.

20 Q Okay. And again your testimony is that Shot 25 occurred
21 right here (indicating)?

22 A Yes, sir.

23 Q Okay. And how far is Shot 25 to the mike, did you say
24 about a hundred feet?

25 A Approximately, I guess; I didn't measure it exactly.

1 Q And that would take about a tenth of a second?

2 A Yes, sir.

3 Q And if you calculate the time in thirtieths of a second
4 pursuant to Channel 11 video time, that would be about three-
5 thirtieths, one-tenth?

6 A Yes, sir; yes, sir.

7 Q So if you subtract three thirtieths from 12:30:05, what
8 you get is approximately 12:30:02?

9 A Approximately, yes.

10 Q Correct? And that would be about the time the shot was
11 actually fired, not when it was actually heard?

12 A Yes, sir.

13 Q 12:30:02. Now I want to redirect your attention to this
14 exhibit that's been marked as Defendants' Exhibit Number 6,
15 which you've seen before. And I'll ask you what the time on
16 that exhibit is?

17 A 12:29:20 on Channel 11.

18 Q So that would have been before the shot was fired?

19 A Before Shot Number 25 was fired, yes.

20 Q Before Shot 25 was fired. And in that picture Harold
21 Flowers is falling, isn't he?

22 A Well, it's hard for me to say he's falling; he looks out
23 of balance.

24 Q He's grabbed his arm and he is twisting?

25 A He could be, yes, sir.

1 Q That's that picture you saw earlier?

2 A Yes, sir.

3 MR. BOST: Could I just walk down to the jury and
4 show them the picture?

5 BY MR. BOST:

6 Q And this occurred before the 25th shot?

7 A Yes, sir, it did.

8 Q Thank you. No further questions.

9 THE COURT: Be brief, please.

10 MR. JENNINGS: Yes, sir.

11 BY MR. JENNINGS:

12 Q Mr. Koenig, Mr. Greeson asked you on redirect about some
13 matters concerning the timing of Shot Number 19, according to
14 your opinion.

15 A Yes, sir.

16 Q And did you not testify on redirect that the time
17 12:22:14, which was contained in your report as being your
18 opinion, was actually some two-thirtieths of a second after
19 the shot was actually fired because of the time it took the
20 sound to reach the microphone?

21 A I'm sorry?

22 Q Didn't you testify that the shot was actually fired some
23 two-thirtieths of a second prior to the 12:22:14 time,
24 according to the time code?

25 A Approximately.

1 Q That's because of the time it takes the sound to reach
2 the microphone, right?

3 A Yes, sir.

4 Q Didn't you testify on direct examination yesterday that
5 you fixed Shots 15 and 19 visually because there were no
6 echoes?

7 A Yes, sir.

8 Q Okay. All right.

9 MR. JENNINGS: I have no further questions.

10 THE COURT: Is that all? Anything else?

11 MR. LINSIN: Nothing further, Your Honor.

12 THE COURT: All right. Thank you, Mr. Koenig.

13 THE WITNESS: Thank you.

14 MR. LINSIN: Your Honor, may Mr. Koenig be excused?

15 THE COURT: Any objections?

16 MR. GREESON: No, Your Honor.

17 THE COURT: All right. You're excused.

18 MR. GREESON: No objection; that's what I meant.

19 THE COURT: No objection. All right.

20 (Witness excused.)

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I N D E X

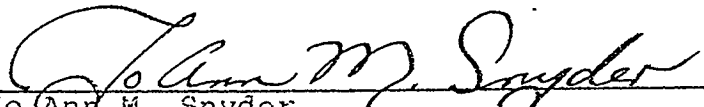
<u>WITNESS</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>REXCROSS</u>
Bruce E. Koenig		282	311	334

E X H I B I T S

<u>DEFENDANTS'</u>	<u>MARKED FOR IDENTIFICATION</u>	<u>REC'D INTO EVIDENCE</u>
No. 5 - Photo	285	
No. 6 - Photo from videotape, Channel 11, 12:29:28	296	
No. 7 - Exhibit of area from state trial	319	
No. 8 - Overlay used in state court	336	
No. 9 - Chart used in state court	341	

CERTIFICATE

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.


Jo Ann M. Snyder
Official Court Reporter

June 19, 1984

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1 UNITED STATES DISTRICT COURT
2 MIDDLE DISTRICT OF NORTH CAROLINA
3 GREENSBORO DIVISION
4

5
6 UNITED STATES OF AMERICA)

7 V.)

Criminal Action
No. CR-83-53-G

8 VIRGIL L. GRIFFIN,)
9 EDWARD WOODROW DAWSON,)
10 DAVID WAYNE MATTHEWS,)
11 ROLAND WAYNE WOOD,)
12 JERRY PAUL SMITH,)
13 JACK WILSON FOWLER, JR.,)
14 ROY C. TONEY,)
15 COLEMAN B. PRIDMORE, and)
16 RAEFORD MILANO CAUDLE)

Winston-Salem, North Carolina
April 4, 1984
3:00 o'clock P.M.

VOLUME IV

17 EXAMINATION OF BRUCE E. KOENIG

18 BEFORE THE HONORABLE THOMAS A. FLANNERY

19
20 TRANSCRIPT ORDERED BY: R. JOSEPH SHER, ATTORNEY
21 UNITED STATES DEPARTMENT OF JUSTICE
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APPEARANCES:

DANIEL L. BELL, II,
NORAJEAN FLANAGAN, and
GREGORY F. LINSIN, Attorneys,
United States Department of Justice,
appearing on behalf of the United States of America.

FRED R. HARWELL, JR., ESQ.,
appearing on behalf of the
Defendant Virgil L. Griffin.

THOMAS J. KEITH, ESQ.,
appearing on behalf of the
Defendant Edward Woodrow Dawson.

JIM D. COOLEY, ESQ.,
appearing on behalf of the
Defendant David Wayne Matthews.

ROY G. HALL, JR., ESQ.,
appearing on behalf of the
Defendant Roland Wayne Wood.

NEILL A. JENNINGS, JR., ESQ.,
appearing on behalf of the
Defendant Jerry Paul Smith.

JEFFREY P. FARRAN, ESQ.,
appearing on behalf of the Defendant
Jack Wilson Fowler, Jr.,

S. FRALEY BOST, ESQ.,
appearing on behalf of the
Defendant Roy C. Toney.

HAROLD F. GREESON, ESQ.,
appearing on behalf of the
Defendant Coleman B. Pridmore.

LEON E. PORTER, JR., ESQ.,
appearing on behalf of the
Defendant Raeford Milano Caudle.

- - - - -

1 Thereupon, the following proceedings were had:

2 (Jury in at 3:30 P.M.)

3 MR. HARWELL: Your Honor, at this time the defense
4 rests.

5 THE COURT: All right. The defendants rest their
6 case.

7 DEFENSE RESTS

8 THE COURT: Does the government have any rebuttal
9 testimony?

10 MR. BELL: Yes, Your Honor, we do.

11 THE COURT: All right. You may proceed.

12 MR. BELL: The United States recalls Special Agent
13 Bruce Koenig.

14 THE COURT: All right.

15 BRUCE E. KOENIG, GOVERNMENT'S WITNESS, PREVIOUSLY
16 SWORN.

17 DIRECT EXAMINATION

18 BY MR. LINSIN:

19 Q Mr. Koenig, would you again state your name for the
20 record and briefly describe your position, sir?

21 A My name is Bruce Koenig, that's K-o-e-n-i-g. I'm a
22 special agent supervisor with the FBI, and I work in the tape
23 analysis field in Washington, D.C.

24 Q Mr. Koenig, in December of 1983, did you have occasion
25 to meet with Professor Hollien and his associate in one of

1 the offices at FBI headquarters in Washington, D.C.?

2 A Yes, sir.

3 Q And on that occasion did you provide any information to
4 Professor Hollien concerning the visicorder model number on
5 which you ran your visicorder wave form graphs?

6 A Yes, sir, I did.

7 Q What did you tell Professor Hollien?

8 A I told him the dual channel graphs were run on a
9 Honeywell 2112 visicorder.

10 Q And did you indicate to him whether or not that was an
11 optical as opposed to a mechanical visicorder?

12 A Yes, sir, I told him it was an optical visicorder.

13 Q Now, Mr. Koenig, during the course of Professor
14 Hollien's testimony, he testified about certain test firings
15 that he had conducted and utilized certain diagrams
16 reflecting the scene of those test firings. Specifically,
17 I'm referring to Defendants' Exhibit H-1 and H-4. Have you
18 had occasion to examine those drawings, sir?

19 A Yes, sir.

20 Q And do you have an opinion, Mr. Koenig, as to why
21 Professor Hollien was unable to locate muzzle blasts based
22 upon his test firings in these locations?

23 MR. GREESON: Objection, Your Honor. There's no
24 testimony like that.

25 ALL DEFENSE COUNSEL: Objection.

1 THE COURT: I seem to recall some testimony about
2 it. I'll let him testify. Go ahead.

3 Ladies and gentlemen, when you have a conflict -
4 testimony of experts is apparently what is about to develop -
5 you have to decide, as finders of the fact, which expert to
6 believe. And you have to consider their background, their
7 experience, and the reasons and the support they had for
8 their conclusions. And you're going to have to decide that
9 when you take this case - who to believe.

10 All right.

11 BY MR. LINSIN:

12 Q Do you have such an opinion, sir?

13 A Yes, sir.

14 MR. LINSIN: Your Honor, at this time may the wit-
15 ness step down and refer to the drawings?

16 THE COURT: He may.

17 MR. GREESON: Your Honor, may we approach the
18 bench just very briefly, so that I might make the record
19 clear?

20 THE COURT: All right.

21 (Bench conference on the record.)

22 MR. GREESON: Your Honor, for the record, I wanted
23 to explain that objection.

24 THE COURT: Go ahead.

25 MR. GREESON: Mr. Hollien came here and testified

1 that he made these test firings for the purpose of locating
2 the muzzle blasts. And he said in his testimony that he
3 could and did locate those muzzle blasts.

4 This question was, "Do you have an opinion why Mr.
5 Hollien couldn't find the muzzle blast," and there's just no
6 evidence about that.

7 THE COURT: Do you want to clear this up?

8 MR. LINSIN: Your Honor, my recollection of
9 Professor Hollien's testimony is that he conducted these test
10 firings and that based upon the results of these test firings
11 and his analysis of all of the other documents that were pre-
12 sented to him, he concluded that no one, including himself,
13 could locate a muzzle blast without extensive test firings at
14 a particular site. That was the ultimate point of his testi-
15 mony.

16 We submit that these test firings and locations,
17 where they were fired, are part of the data relied upon by
18 Professor Hollien in giving his ultimate opinion, and that
19 this witness is entitled to review this data and testify as
20 to the weakness he perceives in any test firings.

21 THE COURT: But did he say - did Hollien say that
22 he couldn't find the source or the location of the muzzle
23 blast in running his control test?

24 MR. LINSIN: He testified, Your Honor, that the
25 test, based upon his findings in the test firings - okay? -

1 and based upon his examination of all of the other evidence
2 that he examined, that in his opinion no one, including him-
3 self, could locate a muzzle blast based upon echo patterns
4 without extensive test firings at a given scene. That was
5 his ultimate opinion.

6 THE COURT: Yes.

7 MR. GREESON: That was about Everitt and Carver,
8 though, Judge. He said that he found the muzzle blasts from
9 his test shots, obviously, and that the reason he was able to
10 do it was because he knew where they were, and he did find
11 the echoes that corresponded with those test shots. That was
12 the whole purpose for doing the test shots. But he did that
13 in order to compare that to Mr. Koenig's results from the
14 Everitt and Carver Street firings, so that he could give the
15 opinion that nobody could do it at Everitt and Carver.

16 He never testified he couldn't find his own test
17 shots, though. He came here and testified that he did find
18 them.

19 MR. PORTER: Your Honor, Mr. Linsin's question---

20 THE COURT: Well, wait a minute.

21 MR. BELL: Your Honor, we're not specifically
22 asking as to whether or not he could find his own muzzle
23 blast or not. Mr. Hollien testified that no human being -
24 and I believe that's close to an exact quote on that - could
25 have located the muzzle blast of the shots at Everitt and

1 Carver. To give that conclusion, he relied on this data that
2 he developed at the test range. And what Mr. Linsin is
3 seeking to do now, is to have Mr. Koenig look at the data and
4 the test that Mr. Hollien did to focus on Mr. Hollien's
5 methods, that's all we're attempting to do.

6 THE COURT: Well, maybe if you sort of rephrase
7 the question.

8 MR. LINSIN: Let me try that, Your Honor, and I
9 think we may be able to.

10 MR. GREESON: I don't mind if he testifies about
11 the tests. I just object to the misrepresentation of the
12 evidence.

13 THE COURT: All right. Rephrase your question.
14 All right.

15 (End of bench conference.)

16 MR. LINSIN:

17 Q Mr. Koenig, Professor Hollien testified that in his opin-
18 ion no human being, including himself, could locate a muzzle
19 blast based upon echo patterns without extensive test firings
20 at a given scene. And part of the data he used in - he
21 relied upon in arriving at that conclusion were the test
22 firings at the locations depicted on Defendants' Exhibits and
23 H-4.

24 Referring to Defendants' Exhibit H-1, do you observe any
25 problems that may have presented themselves in the course of

1 evaluating the data received from these test firings?

2 A Yes, sir.

3 Q All right. If you would, sir - sir, if you could step
4 to this side of the chart and speak so that the court
5 reporter and all the members of the jury can hear - would you
6 explain what problems you observed?

7 A Echoes from gunshots come off like a pool ball, whatever
8 the angle of incidence, the angle of reflection has to be the
9 same. That's basic physics law; you can't change it. You
10 get some scattering, but it's very, very minor. So if you
11 look at the position here, A, which is the firing position,
12 and you come over here to Building - back of Building
13 Number 1, at this angle, it's got to come off at the
14 same angle; therefore, it would never get to these two
15 microphones. So there would be no echoes off this building.

16 This building here, Building G, again we call the angle
17 of incidence has to equal the angle of reflection. It's
18 still not going to quite get to these microphones.

19 So I would expect, under these conditions, if I had
20 these two buildings, just these two here (indicating), I
21 would expect to have no echoes from these buildings. You
22 still might get them from something else. But these two
23 buildings, that makes the angle of incidence, so it has to
24 come off and bounce off the same way.

25 Q All right. And again referring to Defendants' Exhibit

1 H-1, is there any significance in your opinion, sir, to the
2 location on this chart of what has been marked as Building J?

3 A Building J would probably block any echoes that might
4 come from something else back here, going up to the
5 microphones.

6 Q Referring then to Defendants' Exhibit H-4, which depicts
7 another set of test firings, do you have any opinions as to
8 the test firings from this location, sir?

9 A Yes, sir.

10 Q And what are those?

11 A In this one you would get an echo from this building,
12 not at the angle he depicted, but you could go down about
13 like that (indicating), and the angle would be the same, so
14 you should get an echo off this building right here.

15 This building over here, even if you catch the upper
16 corner of it, it's still going to kind of bounce back at this
17 angle. Again, it's got to - whatever angle it is to the side
18 here, it's got to come off at that same angle. If you went
19 farther down, it would be farther down here, so you would
20 receive an echo at the microphone from Building E.

21 Q All right. Now in connection with both of these
22 drawings, Mr. Koenig, Professor Hollien testified that in his
23 opinion sound would, upon striking a solid object such as a
24 building, would echo out in every direction. Now you
25 testified just a moment ago that there would be some deflec-

1 tion in different areas, but that in your opinion the pr
2 cipal echo would be at the same angle at which the echo
3 arrived. Do you have an opinion as to why - as to the
4 correctness of Professor Hollie's view, that sound wou
5 from a gunshot would echo out in every direction?

6 A Yes, sir.

7 Q And what is that opinion?

8 MR. GREESON: Your Honor, I'm going to object
9 this time, simply on foundation. It hasn't been establ
10 that Mr. Koenig has heard or reviewed the testimony of
11 Doctor Hollien. I have no objection to him testifying
12 as to that testimony if he's heard it. It appears to me
13 the only thing he's hearing is the leading questions of
14 Mr. Linsin, and I object for that reason.

15 THE COURT: All right. Has he reviewed the te
16 mony of Doctor Hollien?

17 MR. LINSIN: Your Honor, I am requesting Mr.
18 Koenig's attention to very specific parts of Professor
19 Hollien's testimony and I don't believe it is necessary
20 lay a foundation that hours of tapes have been listened to.

21 THE COURT: You may proceed. I'll overrule the
22 objection. Go ahead.

23 MR. LINSIN: Thank you.

24 BY MR. LINSIN:

25 Q Please proceed, Mr. Koenig.

1 A Wave propagation over a discussion of whether something
2 bounces off a wall or not, there's been quite a bit of
3 research done in this field, at the time in the field. We've
4 discussed it with Bowe, Frank and Newman, who did the Kent
5 State shootings. I talked to Norm Ramsey, Doctor Norm
6 Ramsey, who is head of the physics department at Harvard.

7 MR. GREESON: I object to the hearsay expert, Your
8 Honor.

9 THE COURT: I'll sustain the objection.

10 Go ahead; just give us your opinion.

11 BY MR. LINSIN:

12 Q Would you give us your opinion, sir?

13 A Wave propagation allows that wave - it sounds like a
14 pool ball, a solid object hitting it. So the analogy is
15 good. A wave hits this building here and it comes back off
16 as a wave. The wave at each point is still coming off at an
17 angle of instant reflection.

18 What happens to the body - there's a lot of body
19 sensibility because a body - first off, the wave form makes
20 the body of the building vibrate. Okay. In the case of a
21 building that's extremely minimal. And it's such low
22 frequencies you wouldn't even really see it. You get a
23 certain amount of scattering. But the harder the wall is and
24 the straighter it is, the less header you get. But even if
25 the wall is somewhat rough, it still basically does most of

1 the refraction along that angle. There's very little
2 refraction backwards, for instance.

3 So it's just basic laws of physics. I had it in my
4 sophomore year of college, a whole semester of it. Very
5 straightforward physics, and it has to come off at those
6 angles.

7 There's a little bit of scattering, but you're talking
8 about an extremely small percentage. You won't even see it
9 in the wave form.

10 Q All right, sir. If you could retake the witness stand.

11 Mr. Koenig, have you had occasion to read a copy of the
12 paper that was presented on Professor Hollien's behalf at the
13 recent meeting of the proceedings at the Institute of
14 Acoustics in London, England?

15 MR. GREESON: I object to that, Your Honor. A
16 paper about some other subject, presented in London?

17 THE COURT: What was the question?

18 MR. LINSIN: Your Honor, first of all, I'm just
19 establishing if Mr. Koenig has read this paper. This paper
20 was testified to by Mr. Hollien, and I have a very specific
21 question concerning that paper that, in the government's
22 view, relates to the subject matter at issue here.

23 MR. HARWELL: Your Honor, I object because that
24 paper was introduced during cross examination and not during
25 direct examination, and then they're attempting apparently

1 to---

2 THE COURT: Well, let me hear the question. Go
3 ahead and ask the question.

4 BY MR. LINSIN:

5 Q First of all, sir, did you read that paper?

6 A Yes, sir.

7 THE COURT: Which paper was this again?

8 MR. LINSIN: It was the paper presented on
9 Professor Hollien's behalf to the recent meeting of the
10 proceedings of the Institute of Acoustics in London, England.
11 It was, Your Honor, one of the examples used by Professor
12 Hollien when he said that he had two - on two prior occasions
13 conducted tests to determine whether or not certain
14 transients were gunshots. He testified that his report in
15 this case was one of those prior times when he had been asked
16 to determine whether a certain transient was a gunshot and
17 said that, yes, in this case he determined there were
18 fourteen gunshots.

19 THE COURT: All right.

20 MR. GREESON: Your Honor, the question Mr. Linsin
21 asked was, "Are you familiar with this paper by your
22 associate, Mr. Bryan Klepper, that he offered." This is a
23 paper by Bryan Klepper, not by Harry Hollien.

24 MR. LINSIN: Your Honor, that has the same---

25 THE COURT: All right. You may ask the question.

1 MR. LINSIN: All right. So the record is clear,
2 however, that that Mr. Greeson is referring to is a separate
3 paper in which Mr. Koenig was cited as a reference. This is
4 a paper that Professor Hollien testified that he jointly
5 authored along with J. W. Hicks.

6 THE COURT: All right.

7 BY MR. LINSIN:

8 Q Mr. Koenig, was there any information in that paper
9 concerning the procedures used by Professor Hollien in his
10 analysis of the gunshots in that case which indicates to you
11 why the professor may have difficulty in analyzing gunshots
12 in general?

13 ALL DEFENSE COUNSEL: Object, Your Honor.

14 THE COURT: I'll permit it. Go ahead.

15 A Yes, sir.

16 BY MR. LINSIN:

17 Q And what is that, sir?

18 A His paper says he damped the wave, which is another word
19 for saying a type of filtering of the wave. You cannot
20 filter transient sounds, because one of the ways you test how
21 a filter reacts to something is to put a transient, not a
22 gunshot, but something to look like a gunshot, and you get
23 what's called a transfer function. So in other words, if you
24 put a filter and run a transient-type sound like a gunshot
25 through it, you're going to get an example of what the filter

1 can do, not what the transient looks like. So therefore, you
2 don't ever use filters when you're analyzing transient
3 material.

4 Q All right, sir.

5 MR. LINSIN: May I approach the witness, Your
6 Honor?

7 MR. GREESON: Well, Your Honor, I simply object and
8 move to strike that answer. There's no evidence in this case
9 that there was any filtering or damping or anything else,
10 either from this witness or Doctor Hollien. It's irrelevant
11 to this case.

12 THE COURT: Well, the jury can weigh it.

13 Was there any evidence that that procedure was used
14 in Doctor Hollien's work in this particular case?

15 THE WITNESS: Yes, Your Honor.

16 THE COURT: There was?

17 THE WITNESS: Yes, sir.

18 THE COURT: All right.

19 MR. LINSIN: We are about to get to that.

20 BY MR. LINSIN:

21 Q Mr. Koenig, I'm going to place before you a number of
22 computer-generated wave form charts that were testified to by
23 Professor Hollien, and which he indicated he used in the
24 course of his analysis in this case. The first is
25 Government's G-49, which Professor Hollien indicated was a

1 wave form of an M-80 firecracker in test firing condition.
2 The second is Defendants' Exhibit H-39, which Professor
3 Hollien indicated was a test firing of a .12 gauge shotgun.
4 And the third is Defendants' Exhibit H-14, a test firing of a
5 .38 special revolver. And finally, Government's G-48, which
6 Professor Hollien testified was a computer-generated wave
7 form of Gunshot Number 4, as recorded on Channel 11.

8 Have you had occasion, sir, to analyze those charts
9 which I have just set before you?

10 A Yes, sir.

11 Q And based upon your examination of those wave form
12 diagrams, are those the type of wave forms that you would
13 expect to see when you analyze a gunshot?

14 A No, sir.

15 Q And do you have an opinion as to why they are not?

16 A Yes, sir. They've been filtered; the wave form has been
17 filtered before they've been graphed out here.

18 Q Now would you briefly describe what the filter is, just
19 very briefly - what it is and what it does?

20 A The filter--- There's many types of filters. But the
21 one we're talking about here removes certain frequencies. By
22 frequencies, I'm referring to a range of very bassy sounds.
23 For instance, the lowest sound a pipe organ in a church would
24 make would be a very low frequency. The sound that the
25 highest note on a piccolo or flute could make would be a high

1 frequency. So you have this wide range.

2 Some people talk with a very bassy voice. They have a
3 lot of low frequencies in their voice. Some females talk
4 with a very high-pitched voice, what's called a high-pitched
5 voice, a very squeaky voice. They have a lot of high
6 frequencies in their voice.

7 Filters remove certain frequencies. Okay? In this case
8 the high frequencies have all been removed. In fact, from
9 the best I can determine without having "the" filter,
10 approximately ninety-five percent of the frequencies were
11 removed on this. This is used in other types of acoustics,
12 so it's not a bad procedure in other things to do. But in
13 transient analysis, because of this function of what happens
14 to the filter when you hit this transient through it, you
15 can't filter it. But he's removed ninety-five percent of
16 them, and the wave forms are more an indication of the type
17 of filter used than of the transient itself.

18 Q Just generally, Mr. Koenig, would you describe the
19 characteristics of the wave forms you see in those exhibits
20 I've placed before you and how they are - just how physically
21 they are different from the transients you would expect to
22 see with a gunshot?

23 A Yes, sir. If you're looking at low frequency
24 information, again like I said here, probably ninety-five
25 percent of the frequencies - the high frequencies are gone.

1 They're going to be very smooth and shaped and kind of
2 widespread. If you keep all of the frequencies in, they're
3 going to be very sharp. You're going to see all this
4 tremendous amount of detail. That's the main function that
5 happens when you go through a filter.

6 And at the very beginning, when the transient comes in,
7 it tends to ring the filter down, which means it adds
8 information where it isn't there. The filter is generating
9 the information, the sounds. It also will sometimes exclude
10 information that was on the original wave form because it's
11 being covered up by this filter that's reacting to the
12 information.

13 Q Mr. Koenig, in connection with your examination of
14 Government's Exhibit G-48, the Number 4 test shot, computer-
15 generated wave form - I'm sorry; not the Number 4 test shot -
16 the computer-generated wave form of Gunshot Number 4 from
17 Channel 11, did you prepare any exhibits that would
18 illustrate your testimony concerning the effect of using a
19 filter in analyzing wave forms?

20 A Yes, sir.

21 MR. LINSIN: May this witness step down, Your
22 Honor?

23 THE COURT: Yes.

24 BY MR. LINSIN:

25 Q First of all, Mr. Koenig, I'm going to hand you what has

1 been marked as Government's Exhibit G-50, and ask if you can
2 identify this, sir?

3 A Yes, sir. This is the visicorder chart that I ran of
4 Gunshot Number 4 on Channel 11.

5 Q And what model visicorder was this run on, sir?

6 A 8106A.

7 Q And is that an optical or mechanical visicorder?

8 A It's an optical visicorder.

9 Q All right. And can this illustrate your testimony in
10 conjunction with the other exhibit concerning the differences
11 in wave forms you see using a direct recording and a filtered
12 recording?

13 A This is a direct recording.

14 Q All right, sir.

15 MR. LINSIN: I'll ask Mr. Brereton to hold this,
16 just stretch this out so as many members of the jury can see
17 it as can see it.

18 BY MR. LINSIN:

19 Q Again, sir, if you would step to that side of the wave
20 form; and using this pointer, would you indicate what is seen
21 on Government's Exhibit G-50?

22 A This visicorder chart was run at 500 centimeters per
23 second, approximately 200 inches per second. So you get 200
24 inches of paper for every one second of time on the tape. So
25 you're looking at a very small segment of time. What you're

1 seeing here is Gunshot Number 4 occurring. There's a
2 reasonable chance you may be picking up part of an end-wave.
3 That's a supersonic wave that occurs when the bullet travels
4 faster than the speed of sound. However, you're picking up
5 very little, which means that the microphone may be pointed
6 away from the gunshot blast or the gunshot blast may be
7 pointing away from the microphone, one or the other, and
8 you're just not picking it up well.

9 This is the actual gunshot blast. See how vertical it
10 is? I mean, it just goes from next to nothing, straight
11 down, very, very sharp, and then it reacts back up. And this
12 is probably an echo very close to it, maybe off the pavement
13 or behind the cameraman. But it's so close that it's not
14 going to be very useful.

15 This comes out and you pick up a set of echoes off
16 something, to us it's not very high level. And then you pick
17 up a fairly high-level echo here (indicating). You notice
18 the echoes have a scattering effect. Well, this drops off
19 very, very sharply. This is sharp, but nowhere near as
20 sharp. And then this goes out, this is just, you know,
21 clutter in the background, minor echoes that we cannot dif-
22 ferentiate. In this one we couldn't make a decision as to
23 where the gunshot came from because we felt there was not
24 enough echo information, so I made no decision as to where it
25 had come from.

1 Q Is this, Mr. Koenig, typical of the type of wave forms
2 you would expect to see in a gunshot transient?

3 A Yes, sir. All - everything in the literature,
4 everything we've ever performed, it's always looked just like
5 this.

6 Q All right. Now let me hand you Government's G-51 and
7 ask if you can identify that, sir.

8 A This is another visicorder chart, but this time the
9 filter in it is somewhat of the type that was run by Professor
10 Hollien. Again, every filter, as I said, is slightly
11 different and you can't get an exact analogy. None of his
12 literature lists exactly the filter he uses, so this is an
13 approximation of the type that was used.

14 Q And why did you select this particular type of filter?

15 A We tried to imitate as closely as possible what he had
16 done. We ran it through a number of filters and found one
17 that was as close as we could find to what he did.

18 MR. HARWELL: I object as to what he did.

19 THE COURT: Well, he's an expert, so I'll overrule
20 the objection.

21 BY MR. LINSIN:

22 Q When you're saying, sir, what he did, are you referring
23 to Government's Exhibit G-48, the computer-generated wave
24 form that Professor Hollien testified to about Gunshot Number
25 4?

1 A Yes, sir.

2 Q All right. Now do the wave forms on Government's
3 Exhibit G-48 resemble, in your opinion, in shape or in form,
4 the wave forms that you've just indicated existed in
5 Government's G-50?

6 A No, sir.

7 Q And could you just describe, using the first transient
8 here, illustrate what you mean when you say that?

9 A Can I compare it to Government's Exhibit 50, just the
10 very beginning?

11 Q All right.

12 A The first wave form you see, it's kind of hard to see on
13 here, but it's got a big looping peak like that, a double
14 peak. Okay. That's this material right here, where we're
15 seeing numerous small peaks, his graph just shows it going
16 like this (demonstrating). You're missing all this detail in
17 here, which is - this is the kind of detail you're really
18 looking for to determine if it's a gunshot. With this kind
19 of graph I certainly couldn't make a determination that
20 something's a gunshot. This is the kind of information that
21 you're looking for (indicating). So this is more of an
22 indication of that transfer function I talked about with the
23 filter.

24 Q Now if we could just lay---

25 MR. KEITH: Your Honor, I would object to that. I

1 don't recall the---

2 THE COURT: All right. Don't make a statement in
3 front of the jury. Do you object?

4 MR. KEITH: Yes, sir.

5 THE COURT: I'm going to overrule the objection.

6 MR. PORTER: May we approach the bench, Your Honor,
7 on one brief matter?

8 THE COURT: All right.

9 (Bench conference on the record.)

10 MR. PORTER: Your Honor, we subpoenaed Mr. Koenig's
11 visicorder graphs after we had seen them so we could cross
12 examine him on them. And that subpoena was quashed, and I
13 just object to them bringing visicorder graphs down here now.
14 There was no reason to quash our subpoena in the first place
15 if they can bring visicorder graphs here now.

16 THE COURT: I don't understand. Can you clear that
17 up?

18 MR. LINSIN: Well, Your Honor, this was a graph
19 that Mr. Koenig ran last week - actually, I believe it was
20 probably this week - to illustrate, simply to illustrate his
21 testimony in connection with our rebuttal case. It is not
22 the same type of computer - of visicorder graph that he
23 utilized in his analysis in this case. Those graphs were run
24 on a dual-channel visicorder with time code inserted on the
25 second channel. They are maintained by Mr. Koenig as primary

1 evidence in the FBI laboratory.

2 Now these are not - these are only being used,
3 these two examples are only being used to illustrate his
4 point about what differences occur when a filter is placed on
5 a recording before the transient is displayed in a wave form.
6 And that is the only purpose.

7 THE COURT: Well, I think it's appropriate
8 rebuttal. You can cross examine him.

9 MR. KEITH: Well, my objection is, Doctor Hollien
10 used a computer which has - certain things are different,
11 completely different, than a linear visicorder graph.
12 They're comparing apples and oranges. There's no
13 qualification.

14 THE COURT: Well, you can cross examine him on
15 that. That's his theory if he can establish it.

16 MR. KEITH: Well, it establishes what a computer
17 does and what this thing does.

18 THE COURT: Well, you can ask him about that. All
19 right.

20 MR. LINSIN: Thank you, Your Honor.

21 (End of bench conference.)

22 BY MR. LINSIN:

23 Q Just so the record is clear, sir, would you now identify
24 what Government's G-51 is?

25 A Yes. It's a visicorder chart, also run at 500

1 centimeters per second, that is filtered.

2 Q A visicorder chart of what, sir?

3 A Gunshot Number 4 on Channel 11.

4 Q And would you indicate how this illustrates your
5 testimony concerning the Government's G-48 that was testified
6 to by Professor Hollien?

7 A In this case, running it through the filter. This is
8 the same wave form I just showed you except run through a
9 filter. All of the sudden, all of the detail has
10 disappeared. Everything is--- The nice sharp transients I
11 had before are gone.

12 If you'll remember - maybe we can display the other one
13 at the same time - but in this area there were some nice
14 peaks. The filter has taken them out; they're not even there
15 anymore, and it's generated - some of these higher peaks
16 aren't even on there because your filter itself rings. In
17 other words, it produces sound; it causes a very loud sound
18 activating the circuit. And so that's how we test filters.
19 One way to test a filter is to put a transient on it to see
20 what the filter does. It's not a good indication of the
21 transient, but it's an excellent indication of the filter.

22 Q Do these correspond?

23 A Okay. They now correspond. And if you look at this,
24 you'll see - like it says, where all these nice sharp peaks
25 we were getting - they're very useful for our technique - are

1 gone. In this area we see these - this set of echoes right
2 here, the filters have smoothed it all out. This area it's
3 taken these peaks and very much smoothed them.

4 When you get down in here, all of the sudden you start
5 picking up oddball peaks that aren't going to always match up
6 with what's there. Like this is pretty solid, and you've got
7 a big flat area there. What you're seeing is, like I said,
8 this filter being - electronically being bounced around by
9 the signals or covering the signals. Because remember,
10 you're talking about again 200 inches of paper in one second.
11 So you're talking very, very short periods of time.

12 Q All right, sir. Now do the wave forms that you examined
13 on Government's G-48, which is the computer generated wave
14 form testified to by Professor Hollien, do they more closely
15 resemble, in your opinion, those on Government's G-50 or
16 those on Government's G-51?

17 A G-51.

18 Q All right, sir. And do you have an opinion as to why
19 that is?

20 A Because he filtered the information, the transient
21 information.

22 Q All right. You can retake the stand.

23 Now, Mr. Koenig, as I indicated earlier, Professor
24 Hollien testified that in his opinion no one, including
25 himself, could locate a gunshot blast based upon echo

1 patterns without testing conducted at the scene of the
2 incident. And my question to you, sir, is did you, in your
3 analysis in this case, utilize test firings at the scene of
4 Everitt and Carver?

5 A Yes, sir.

6 Q All right. Would you explain how you did that?

7 A Test firings were on the actual day of the incident by
8 the individuals involved. The best test firing you could
9 have is to have someone at the scene at that time shooting a
10 weapon. We have visual information on a number of the
11 gunshots, where you see where the person is standing and you
12 see him shoot at that time. The cars, everything else, is
13 set in the right place. It's the most perfect test shot you
14 can get, using the same equipment, the same recording
15 equipment, the same microphone, at the location, the same
16 temperature, same humidity, cars were exactly in the same
17 place, the people were in the same place. You couldn't get a
18 better test firing.

19 Going back to the scene afterwards would always be a
20 compromise. You could never get the cars exactly right. You
21 could never get everything exactly right. You couldn't get
22 the temperature exactly right, the humidity exactly the same.
23 It would be an impossibility. The best test firings are if
24 you've got information right at the scene right then. Here
25 we had a number of gunshots at the scene; we could visually

1 see the gunshots occurring.

2 Q Mr. Koenig, Professor Hollien also testified that in his
3 opinion it is possible to locate the placement of a muzzle
4 blast based upon the measurement of the intensity of that
5 gunshot blast.

6 MR. PORTER: Objection, Your Honor. That wasn't
7 the testimony.

8 MR. GREESON: It's not at all his testimony, Your
9 Honor. You can't base a question on testimony that's not in
10 evidence.

11 THE COURT: You better come up to the bench.

12 (Bench conference on the record.)

13 THE COURT: I presume you have a basis for the
14 question?

15 MR. LINSIN: Your Honor, it's clearly the
16 government's recollection that at the very conclusion of his
17 testimony, Professor Hollien, despite his testimony that he
18 could not locate the muzzle blast, "no human being could,"
19 Professor Hollien gave an opinion that Gunshots 3, 4 and 5
20 were fired somewhere in the intersection or somewhere near
21 the administration building, and that he based that opinion
22 upon the intensity of the recorded muzzle blast on Channel
23 11. And that was his whole basis for his tendering that
24 opinion. He drew a circle in the area of Everitt and Carver
25 and said in his opinion, Gunshots 3, 4 and 5 occurred here,

1 and then he drew another circle to the south of the
2 Administration Building, on the northwest corner of Everitt
3 and Carver, and said that they may have occurred here too.
4 But the basis for that opinion was the intensity of the
5 gunshots.

6 THE COURT: Wouldn't it be better if you quoted
7 Doctor Hollien's testimony and then confronted him with that,
8 and then asked him what his view is, rather than making a
9 general statement? Why don't you confront him with the
10 Doctor's testimony and say, "Well, what do you think about
11 that?"

12 MR. BELL: The problem is just simply the lack of a
13 transcript to do that with. What Mr. Linsin is doing---

14 THE COURT: Well, you had the tape recorder here.
15 You've had plenty of time to have recorded his testimony.

16 MR. BELL: Well, we could have done that.

17 THE COURT: Well, you could have.

18 MR. BELL: It just didn't occur to us that there
19 was anything wrong with this method.

20 THE COURT: But you're not quoting directly from
21 his testimony. You're just taking a piece of it. Wouldn't
22 it be better to confront him with the opinion of Doctor
23 Hollien and then he could contradict it, rather than a
24 general conclusion as to what he said?

25 MR. LINSIN: Your Honor, perhaps so. But at this

1 point I don't understand the basis of the defendants'
2 objection.

3 MR. GREESON: Well, let me explain.

4 THE COURT: All right. Do you want to explain it?

5 MR. GREESON: If I could get in here just a little
6 closer so I don't have to yell.

7 Your Honor, Doctor Hollien did not testify as to
8 the direction or location - exact location or anything else.
9 He simply said that as between a choice of down the street
10 and close across the street, the intensity of the sounds
11 itself was consistent to a closer gunshot. That's all he
12 said. He never placed them.

13 MR. LINSIN: That's right, Your Honor. He drew
14 three areas on Government's D-10 in connection with his
15 testimony. He said, "Based upon the intensity, I believe
16 they first came from right here," and he drew it right in
17 the intersection of Everitt and Carver. He drew another area
18 below the Administration Building. He said that would be
19 another possible area. But I exclude that because the camera
20 pans back there right after that and there's no one seen
21 there.

22 Another possible area is way down the street. But
23 I believe that's highly unlikely because the intensities are
24 so high.

25 MR. GREESON: It's too loud. That's all he said,

1 it was just to loud. He didn't say he was placing the
2 direction that it came from or anything else.

3 MR. LINSIN: So the defense has left, from that
4 testimony - they're ready to argue that in Doctor Hollien's
5 testimony, in his opinion, Gunshots 3, 4 and 5 occurred in the
6 intersection. And the basis for that opinion was the
7 intensity level of the gunshots. That's exactly what Mr.
8 Greeson has just described.

9 MR. GREESON: That testimony was only offered to
10 corroborate Mr. Koenig's state court testimony, in which he
11 said he was 99 percent sure.

12 THE COURT: Well, look, I think there's some basis
13 for the question. I'm going to permit it. You can take him
14 on cross and you can confront him with Doctor Hollien's
15 testimony.

16 MR. GREESON: Your Honor, I think it's totally
17 improper for this man to be testifying without even knowing
18 what Doctor Hollien testified to in the first place.

19 THE COURT: I'm going to permit it. Go ahead.

20 MR. LINSIN: Thank you, Your Honor.

21 (End of bench conference.)

22 BY MR. LINSIN:

23 Q Mr. Koenig, Professor Hollien also testified that in his
24 opinion it is possible to locate the placement of a muzzle
25 blast based upon the intensity of the recording of that

1 gunshot sound. Do you have an opinion, sir, as to the
2 accuracy or inaccuracy of that method used to locate a
3 gunshot blast?

4 MR. GREESON: We object to that question, Your
5 Honor.

6 THE COURT: All right. It's the defendants conten-
7 tion that Doctor Hollien didn't testify that way. Your
8 recollection will have to serve.

9 Go ahead.

10 BY MR. LINSIN:

11 Q Do you have such an opinion, sir?

12 A Yes, sir.

13 Q And what is that opinion?

14 A Under the conditions out there, with the equipment used
15 and everything else, it just wouldn't be possible because you
16 don't know which direction the microphone is in. You don't
17 know which direction the gunshot was in. You don't know the
18 loudness of that particular weapon. In other words, if the
19 microphone is facing away from the gun, the gun is pointing
20 the opposite direction, and they were fairly close, it might
21 be the same level of sound as if the microphone was facing
22 the weapon and the weapon was a low caliber weapon, but it
23 was much farther away, but it was pointed at the microphone.

24 So it gets down to that it's very difficult under normal
25 conditions to do that. Under - using certain types of

1 microphones and tape recorders, under a test condition, I
2 think it might be possible. Under real world conditions and
3 regular recording equipment not made to do such things, you
4 know, you're just making a guess.

5 MR. LINSIN: Your Honor, we just have one more set
6 of questions. We will need a couple of moments, however, to
7 set up the tape on the tape recorder. This is the tape
8 recording, Defendants' Exhibit 812, that was played during
9 Professor Hollien's testimony.

10 THE COURT: How long will it take to set it up?

11 MR. LINSIN: I'm told two or three minutes, Your
12 Honor. It's a question of finding the right spot on the
13 tape. There are, apparently, a number of things recorded
14 here.

15 THE COURT: All right. I'll excuse the jury for a
16 few minutes while you set it up. All right. You'll be
17 excused for a few minutes.

18 MR. LINSIN: All right.

19 (Jury out at 4:14 P.M.)

20 MR. GREESON: How long did you say?

21 MR. LINSIN: I think just two or three minutes.

22 THE COURT: Two or three minutes.

23 MR. BELL: Thank you, Your Honor. I think we've
24 finally located it.

25 THE COURT: All right. Bring the jury back.

1 MR. PORTER: Your Honor, while the jury is
2 returning, may we approach the bench?

3 THE COURT: All right.

4 (Bench conference on the record.)

5 MR. PORTER: Your Honor, we have been informed, I
6 believe, that Mr. Bratcher is here. The marshal has brought
7 him for four reasons. One being that we wanted to interview
8 him tonight, and it would have to be at the marshal's con-
9 venience, I presume. So do you want to go ahead and do it
10 after 5:00?

11 And I wanted to inquire whether Your Honor was
12 going to stop at 5:00 or go till 6:00?

13 THE COURT: I plan to go till 6:00. Why can't we
14 dispose of this matter, even if we have to hold him in jail
15 overnight. Either you're going to use him or not use him, if
16 I let you use him.

17 MR. BELL: I was going to say, the government would
18 oppose it, but if the Court is inclined to do it, this would
19 be---

20 THE COURT: This would be the most appropriate
21 time, if I'm inclined to do it.

22 MR. BELL: We could even - before Mr. Koenig begins
23 cross examination, it would be more appropriate, in our view,
24 though we do continue our position on it.

25 THE COURT: I understand.

1 MR. PORTER: Well, Your Honor, the second most
2 important point is that obviously we need an opportunity to
3 speak with Doctor Hollien for an extended period of time by
4 telephone, and we'd want to do that as soon as court
5 recessed, before we have to cross examine.

6 THE COURT: Well, I don't want to hold this man
7 overnight, if I decide to let him testify.

8 MR. PORTER: I understand. Yes, sir.

9 THE COURT: So you could probably ascertain in a
10 short period of time whether or not he'd be helpful to you.

11 MR. HALL: Your Honor, I think I will do it, but
12 there will be one other attorney there. I don't want to run the
13 risk of his accusing me, so there will be two of us there.

14 Your Honor, what we propose to do---

15 THE COURT: Why don't we do this, why don't we
16 finish the direct examination of Mr. Koenig. And then I'll
17 recess and let you talk to this person, and you report to me
18 whether you're going to use him or if you want to use him,
19 what the proffer is. Then I'll decide whether or not you can
20 use him, and we'll dispose of that.

21 MR. PORTER: Yes, sir.

22 THE COURT: So let's go ahead and finish the
23 direct.

24 MR. PORTER: And then probably have the cross
25 examination of Mr. Koenig in the morning? It would probably

1 work out that way, I would suspect.

2 THE COURT: I don't know. This case is beginning
3 to drag down, you know. Why do you have to talk to Hollien
4 before you cross examine this witness?

5 MR. PORTER: Well, Your Honor, Doctor Hollien has
6 been accused of some things today.

7 THE COURT: Well, how much more do you have on
8 direct?

9 MR. LINSIN: Just two or three questions, Your
10 Honor. We're just going to listen to the tape and have him
11 illustrate it with the transient wave form, that's all.

12 THE COURT: Well, let's dispose of that, and then
13 I'll decide what to do.

14 MR. LINSIN: Thank you, Your Honor.

15 THE COURT: Let's bring the jury in.

16 (Jury in at 4:30.)

17 MR. LINSIN: Your Honor, at this time we would like
18 to play a portion of Defendants' Exhibit H-12, which was used
19 during the course of Professor Hollien's testimony. We are
20 going to--- It is a tape recording of the Channel 11 sound
21 track at one-quarter speed, and we would propose to play
22 Gunshots 3, 4 and 5 on this tape.

23 THE COURT: All right.

24 BY MR. LINSIN:

25 Q Mr. Koenig, I'm going to ask you to listen to the three

1 gunshots you will be hearing on this tape, and then I will
2 ask you to step down and in connection with Gunshot Number 4,
3 ask you if you can illustrate what we've heard as Gunshot
4 Number 4 on Government's G-50, which we have already
5 displayed to the jury.

6 (Whereupon, a portion of Defendants' Exhibit H-12
7 was played.)

8 BY MR. LINSIN:

9 Q First of all, Mr. Koenig, given that we were slowed to
10 one-quarter speed, how many gunshots did we just hear on this
11 tape recording?

12 A Three.

13 Q Now with regard to the middle gunshot, which has been
14 testified to as being Gunshot Number 4, can you illustrate
15 what we just heard on this tape utilizing Government's G-50,
16 the wave form chart of Gunshot Number 4?

17 A Yes, sir.

18 MR. PORTER: Your Honor, I object to this as being
19 repetitious of his earlier testimony in the trial, where he's
20 already testified to how many gunshots there were.

21 THE COURT: I'm going to permit it.

22 MR. LINSIN: Thank you. If the witness may step
23 down, Your Honor.

24 BY MR. LINSIN:

25 Q Would you step down?

1 I'll start off by--- If we could move to the center of
2 the jury here. All right.

3 A You start off by hearing a very sharp sound of the
4 gunshot itself, which is characterized by a very, very quick
5 dropoff from near zero to a very high amplitude. Then you
6 hear like kind of thud sound followed by another sharp sound,
7 not as sharp as the original gunshot, reflecting the echo.
8 So really you're hearing the original gunshot, kind of a
9 slight thud, and then a sharp echo following it.

10 MR. LINSIN: No further questions, Your Honor.

11 THE COURT: All right. Well, we're going to have
12 to take another brief recess, ladies and gentlemen. Don't
13 discuss the case during the recess.

14 (Jury out at 4:35 P.M.)

15 THE COURT: Mr. Hall, you want to talk to that
16 witness?

17 MR. HALL: He's upstairs on the third floor. We
18 need to get some exhibits to---

19 THE COURT: How much time do you want?

20 MR. HALL: I would think ten or fifteen minutes at
21 the outside. Of course, I don't know what the man is going
22 to say.

23 THE COURT: I understand.

24 MR. HALL: He may start screaming and yelling like
25 a dying duck. Maybe 30 minutes.

1 THE COURT: All right. Why don't you have somebody
2 report to me in 15 minutes as to how you're progressing?

3 MR. HALL: Right. Yes, sir.

4 THE COURT: All right.

5 (Short recess from 4:40 P.M. till 5:00 P.M.)

6 THE COURT: Before you bring the jury in---
7 Mr. Hall, are you going to use that witness? What did you decide?

8 MR. HALL: May we approach the bench?

9 THE COURT: Yes. All right.

10 Do you want to step down, sir?

11 (Bench conference on the record.)

12 MR. HALL: There were four of us up there, had four
13 attorneys and two U.S. Marshals, and we can tell the Court an
14 unequivocal no.

15 THE COURT: I see.

16 Do you want to use him?

17 MR. BELL: No thank you, Your Honor. Thank you
18 anyhow.

19 THE COURT: What do you want to do now? Are you
20 ready to cross examine Mr. Koenig?

21 MR. GREESON: If I have to, Judge. I'd rather have
22 time to go meet and talk about time for closing arguments,
23 and so forth, but---

24 THE COURT: Well, let's finish this up. I'm afraid
25 we're going to wind up working Saturday at the rate we're

1 going. I'd love to finish this case.

2 MR. PORTER: Well, Judge, just so we don't waste
3 any more time at a later bench conference, after Mr. Koenig
4 finishes, I think we certainly will bring Doctor Hollien
5 back, and I'll of course draft him.

6 THE COURT: Hollien back? Well now, wait a minute
7 now. I'm not too sure about that. We'll discuss that. I
8 don't know why you have to bring him back.

9 MR. GREESON: Well, because Mr. Koenig has said a
10 number of things that aren't true.

11 THE COURT: Well, there's got to be an end to this.
12 I mean, you can't just keep---

13 MR. PORTER: Oh, yes, sir. Only---

14 MR. GREESON: It would be pure surrebuttal, but he
15 just made some statements that aren't true, just flat not
16 true.

17 MR. BELL: Your Honor, may I make an observation on
18 that point?

19 Our position on it would be that if it's just a
20 question of who gets the last word, we would be opposed to
21 it. But Mr. Hollien already had plenty of opportunity and
22 made full use of it, to criticize Mr. Koenig's findings.
23 Mr. Koenig was not able until this rebuttal, of course, to
24 speak to Doctor Hollien, to what he did. Now if the only
25 purpose in Professor Hollien's coming back is to have him

1 have the last word and go over the same thing---

2 THE COURT: Well, that's not the purpose of
3 rebuttal.

4 MR. GREESON: We wouldn't bring him back for that.

5 MR. PORTER: That's not the purpose of it.

6 THE COURT: Well, you'll have to make a proffer to
7 me and I'll consider it.

8 MR. PORTER: Yes, sir. Could we have a short cham-
9 bers conference then, once the court adjourns? I think that
10 would be the appropriate time to do that.

11 MR. GREESON: Today?

12 MR. PORTER: Well, I've got to tell him to get on
13 the airplane.

14 THE COURT: Well, what are you suggesting?

15 MR. PORTER: There are only two flights out of the
16 city he lives in, each day.

17 THE COURT: Where does he live?

18 MR. PORTER: Gainesville, Florida. He - well, he
19 probably could drive to Jacksonville and catch another one,
20 possibly.

21 THE COURT: Well, what would he say? He didn't use
22 the filter?

23 MR. GREESON: Absolutely.

24 THE COURT: He did not use a filter?

25 MR. GREESON: Absolutely not.

1 MR. HALL: And filter or no didn't come into the
2 case until Mr. Koenig came in.

3 MR. BELL: Well, if I may, I would like to discuss
4 that with my co-counsel. We may be able to work with the
5 defense on that one issue, but it's something I would need to
6 talk over with them. If that's all he's going to say, it's
7 possible that we would be willing to stipulate to it.

8 THE COURT: Well then, how about your witness? The
9 witness said he used it.

10 MR. BELL: Oh, no. The testimony - the government
11 would not stipulate. The government---

12 THE COURT: But your witness testified that
13 Doctor Hollien used a filter.

14 MR. BELL: Yes, sir. And the government might be
15 willing to stipulate.

16 THE COURT: To what?

17 MR. BELL: That Professor Hollien, if called in
18 rebuttal, would testify that he did not use a filter. We
19 might be willing to stipulate to that. We're certainly not
20 going to stipulate that he didn't use a filter. And even
21 then I'm not sure we would be willing to do it, but it is
22 something I raise as something that just---

23 MR. GREESON: Of course, we have evidence of equal
24 dignity, but that's the government's---

25 MR. PORTER: Your Honor, maybe I can propose this.

1 I'll tell Doctor Hollien tonight to go ahead and make
2 arrangements just in case he does come up here, and then we
3 will talk to him tonight to make sure what points we would
4 ask him to testify to when he comes back. And then in the
5 morning we'll make a proffer to you as to what he would
6 testify to and then ask for approval to pay for him to come
7 back.

8 THE COURT: Well, all right. But we can finish
9 with Koenig here this evening?

10 MR. GREESON: If you make us stay long enough, yes,
11 sir.

12 THE COURT: Well, okay. Let's try and finish this
13 thing or else we're going to be here Saturday.

14 Okay. Do the best we can. All right.

15 (End of bench conference.)

16 (Jury in at 5:10 P.M.)

17 THE COURT: All right.

18 MR. GREESON: Thank you, Your Honor.

19 CROSS EXAMINATION

20 BY MR. GREESON:

21 Q Mr. Koenig, did you read a transcript of Doctor
22 Hollien's testimony?

23 A In this case?

24 Q Yes, sir.

25 A No, sir.

- 1 Q Did you listen to a tape recording of Doctor Hollien's
2 testimony in this case?
- 3 A No, sir.
- 4 Q Did somebody tell you what he testified to?
- 5 A Generally, some of the items, yes, sir.
- 6 Q Some of the items. And was that Mr. Linsin?
- 7 A Mr. Linsin and several other people.
- 8 Q So it would be accurate to state, would it not, that the
9 only thing you know about what Doctor Hollien testified to is
10 what somebody with government counsel told you; is that right?
- 11 A That and the exhibits, yes, sir.
- 12 Q That and the exhibits. You mean these diagrams here?
- 13 A Yes, sir.
- 14 Q Now about this pool ball shot, is it your testimony
15 that sound waves travel in a straight line?
- 16 A Oh, no, sir.
- 17 Q As I recall, in your former testimony you said something
18 about dropping a pebble in a pond, didn't you?
- 19 A Yes, sir.
- 20 Q And you talked about the ripples that go out all around
21 that pebble that you drop in?
- 22 A Yes, sir.
- 23 Q And you used that analogy to tell the jury what a sound
24 wave did?
- 25 A That's correct.

1 Q Is that right? Now the truth of the matter is, sound
2 waves don't travel in a flat plane, do they?

3 A No, sir. They travel in all directions.

4 Q Excuse me?

5 A They travel in all directions.

6 Q Something like a basketball? They go off in all direc-
7 tions, like a round ball?

8 A I don't like that analogy, but sound travels in all
9 directions.

10 Q Okay. Do you have another analogy?

11 A Not that I can think of.

12 Q Okay. Now in all of your testimony in this trial, in
13 the former trial, and in all of your reports, you have given
14 no attention whatever to the fact that sound waves go off on
15 three planes; isn't that right?

16 A Our analysis certainly considers that.

17 Q All of your testimony and your analysis deals only with
18 one plane, isn't that right?

19 A Well, you can deal with one plane if you're going from a
20 sound source at one place to a microphone at another. That
21 makes up one plane. You don't have to worry about what's
22 happening on a different plane.

23 Q Right. But when you drew that diagram that the jury has
24 seen, showing an echo, that was a single plane diagram,
25 wasn't it?

1 A Yes, sir.

2 Q And it showed just a bounce off of a building, coming
3 off? And you said that because sound travels like a pool
4 ball shot, the angle of incidence is equal to the angle of
5 reflection. Is that right?

6 A Yes, sir.

7 Q Then you were able to measure the length of these lines
8 by looking at your sound waves on your visicorder graph and
9 tell us where the shot was, within a few inches; isn't that
10 what you told us?

11 A Well, you kind of went backwards from that, but I think
12 that's the general meaning, yes, sir.

13 Q Now the truth of the matter is that instead of traveling
14 in a straight line, sound waves radiate like that
15 (demonstrating) toward the object that they're striking,
16 don't they?

17 A Yes, sir.

18 Q And when they bounce off, they bounce off the same way,
19 don't they?

20 A That's correct.

21 Q And so you don't - you do have echoes coming off at
22 other angles than a straight equal angle of incidence and
23 reflection, don't you?

24 A Very little. The wave propagation front on that, if you
25 integrate it over that section coming off, it comes off

1 almost - it comes off perfectly. Angle of incidence equals
2 the angle of reflection.

3 Q The wave does?

4 A The wave propagation front. It's basic physics.

5 Q The wave propagation front.

6 A So if you deal in a single plane, from a single point to
7 another single point, you can draw the line. If you're
8 interested in what the sound does over some area, you draw it
9 as a wave front covering that whole area. Yes, sir.

10 Q Okay. Let me understand your testimony then. You're
11 telling me if there's a muzzle blast from a gun at this point
12 (indicating), that you're going to get a straight line - and
13 there's a microphone right here - that you're going to get a
14 sound from the muzzle blast that goes straight toward it. Is
15 that right?

16 A Yes, sir.

17 Q And then you're going to get a sound sometime later than
18 that that is represented by this straight line echo to the
19 microphone. Is that right?

20 A Yes, sir, because it's a longer distance to go.

21 Q And you're going to tell me also that if there's a
22 microphone right there (indicating), that you won't hear that
23 echo. Is that right?

24 A No. That's a different plane. You'd then draw a line
25 directly from the muzzle blast to that mike and draw a dif-

1 ferent angle off the wall.

2 Q Okay. So you're saying that the angle then would hit
3 the wall somewhere different?

4 A Yes, sir.

5 Q And it would be something like this?

6 A Yes, sir. In other words---

7 Q So that your angle of incidence would equal your angle
8 of reflection the same way?

9 A Right. You have a wave front there that goes in all
10 directions. To simplify it for our use, you're dealing with
11 one muzzle blast at one place and one microphone in one
12 place. You actually have an infinite number of points in
13 that wave front coming across, cresting in each sound wave,
14 going in all directions. It would be impossible to display
15 that. But from any one point to another point, you can use a
16 plane and very accurately represent it.

17 Q Okay. I just want to understand your testimony. And
18 what you're saying is that you do not get, on this original
19 example here - you cannot get an echo that comes off that
20 wall?

21 A Well, on a transient sound it's so loud and very short
22 duration, that what happens is, all you do is get scattering.
23 If you were in an auditorium with lots of frequencies, low
24 volume, and a wall that was not perfectly smooth, you would
25 get - you know, it would be a rough wall. You're not dealing

1 with a - you know, dealing with a lot of little curves. It
2 bounces all over the place.

3 In a concert hall they try to avoid that on purpose.
4 Because if you didn't, you'd be hearing echoes from every
5 place on the wall, and it wouldn't be understandable. So if
6 that didn't work, you couldn't go to a concert. You'd just
7 hear--- You'd be in the back of the concert hall and you'd
8 hear just junk. You wouldn't even know what was being played
9 up on the stage. So that law has to be obeyed for any time
10 you listen to music or anything else. I certainly simplified
11 it from one point to another, but that's how it works. The
12 wave propagation integration is not a trivial thing to
13 discuss with people that have - don't have physics' degrees.

14 Q Well, it's certainly necessary to follow that rule about
15 the pool ball in order for you to make your measurements?

16 A Right. It's a good analogy. Actually, it's a wave
17 front, but it acts just like a pool ball.

18 Q All right. Let me ask you this. Does it make any dif-
19 ference at all whether that happens to be brick or metal?

20 A It's certainly--- Acoustically, they're very different.
21 But with a transient sound, you're talking about a very short
22 duration, high impulse, high energy impulse that just kind of
23 hits it and bounces off. It's like kind of throwing, you
24 know, a golf ball at a wall. It's going to come off at an
25 angle. Well, if you threw a Nerf ball out there, who knows

1 where it might come off. But this hard signal hits this hard
2 wall and comes off.

3 Now if the wall was rough and not fairly smooth, you
4 know, it could come off at a lot of different angles.

5 Q Okay. And when Doctor Hollien says that you get echoes
6 at different angles than equal angles, you say he's just
7 wrong?

8 A Well, you get very, very low amplitude scatter.

9 MR. GREESON: May I approach the witness, Your
10 Honor?

11 THE COURT: All right.

12 MR. GREESON: This has not been marked for
13 identification?

14 MR. LINSIN: No, it has not, Your Honor. We'd be
15 happy to mark it as Government's G-52.

16 MR. GREESON: Just so I can refer to it, Your
17 Honor.

18 MR. LINSIN: And for the record, I'm marking as
19 Government's G-52 a paper authored by Doctor Harry Hollien
20 and J. W. Hicks.

21 MR. GREESON: Well, I'll get the witness to
22 identify the exhibit, if it's all right, Your Honor.

23 THE COURT: All right. Let's proceed.
24
25

(The document above
(referred to was marked
(for identification as:

(GOVERNMENT'S EXHIBIT
(NO. G-52.

BY MR. GREESON:

Q I'll hand you what's been marked as Government's Exhibit G-52 and ask you if that's the article that you testified to earlier today?

A Yes, sir.

Q And it's entitled "Acoustic Signatures of Handgun Firings: A Case Study"?

A Yes, sir.

Q All right. And this was prepared by Doctor Hollien in conjunction with some other people?

A That's correct.

Q Directing your attention to Page 2, the third paragraph on the page, is that the--- Excuse me. No, no. The third paragraph on the page, is that the paragraph in which you find something about damping or filtering?

A Well, he certainly says the wave front was damped. Now he didn't use this system when he did his analysis. He used a computer.

Q He didn't use what system?

A Well, he didn't--- My understanding - I don't know what equipment he used before - but it looks like a regular

1 computer plot, and he ran this on a graph, polygraph machine.

2 Q All right. Let me call your attention to the paragraph
3 above that.

4 A Okay.

5 Q You see there where it says "four analysis procedures
6 were carried out on all shots"?

7 A Yes, sir.

8 Q And they included "A. Time by frequency, by amplitude
9 (TFA) sound spectrograms."

10 A Yes, sir.

11 Q Do you know what that is?

12 A Yes, sir.

13 Q Okay. Does that - I mean, do those words there after
14 the little "a" in parenthesis indicate anything to you about
15 whether or not those sounds were damped or filtered?

16 A Well, most voice prints do provide some filtering. Now
17 whether he used it or not, I can't answer that question. His
18 paper is not very complete.

19 Q Well, this paper is not about voice prints either, is
20 it?

21 A No, sir.

22 Q This is about gunshot analysis?

23 A Yes, sir.

24 Q Now my question to you is, do those words "time by
25 frequency, by amplitude (TFA) sound spectrograms" tell you

1 anything about whether or not the sounds were damped or
2 filtered in that particular analysis procedure that he
3 carried out?

4 A I don't know. The equipment is capable of doing that.
5 I don't know whether he did it or not.

6 Q But you have no idea whether he did it?

7 A No, I don't.

8 Q Now to go on to double "B", and it says, "damped wave,
9 high speed level recordings," that appears to indicate
10 another analysis procedure in which a damped wave was use;
11 does it not?

12 A Yes, sir.

13 Q Now before we go on, let me ask you first of all, what
14 is a filter or a damper?

15 A It can mean a lot of things. It normally reduces
16 certain frequencies.

17 Q Where do you put it?

18 A Well, you can put it anywhere. You can put it before
19 you record it, you can do it after you record it, you can put
20 it before the chart, it can be part of the instrument, it
21 could be any place.

22 Q Well, it's a little machine or a little box or
23 something, that you attach somewhere in the circuitry in
24 order to make a damped sound?

25 A Not necessarily. The equipment itself may do it, right

1 inside the box.

2 Q Does it go on a microphone sometime? Can you attach it?

3 A I've seen damping systems on microphones, yes, sir.

4 Q What does that look like?

5 A It can be, you know, a cheap little thing that's this
6 big (demonstrating), or it can be a laboratory instrument.
7 It just - it varies.

8 Q You're not talking about a piece of cloth or a
9 handkerchief or something you put over the top of the
10 microphone, are you?

11 A Well, I would never do it that way, no, sir.

12 Q But that could damp the sound?

13 A That certainly would damp the sound, yes, sir.

14 Q Okay. Well, what's the reason for filtering or damping
15 a sound?

16 A Certain acoustical signals you're looking at, the
17 information you're looking for is in some particular
18 frequency range, often in sound work it's in very low
19 frequencies. So to make that clearer, you just look at that.
20 So, like I said, certain vibration effects, for instance,
21 they use mostly low frequency information, so they reduce all
22 the high frequency information. It's a very common---

23 Q Do you know what---

24 A It's a very common procedure.

25 Q Do you know what equipment Doctor Hollien used for his

1 test firings?

2 A For his test firings? His charts said he used a Uher
3 4000.

4 Q Do you know what that is?

5 A I don't - I didn't think the tape recorder was still
6 made. It's a - well, it used to be a professional tape
7 recorder, but it's no longer listed as such. It's kind of a
8 heavy duty, you know, tape recorder you can kind of beat
9 around. That would be my classification. I don't know
10 anybody that uses that kind of recorder anymore.

11 Q Okay. And are you saying that tape recorder is equipped
12 with a damper?

13 A You can get all kinds of options for that recorder. I
14 have no idea if it does or not.

15 Q But you don't know whether it has?

16 A No, sir.

17 Q Okay. Back to the article here, where he's talking
18 about the four analysis procedures that were carried out on
19 all shots. And we're down to "C", where it says, "Fast
20 fourier" - f-o-u-r-i-e-r - "transform (FFT) spectrograms with
21 an XY plot." Do you know what that is?

22 A Yes, sir.

23 Q And does that have a damper built into it?

24 A Some of them do, yes, sir.

25 Q Some of them do? You could if you wanted to?

1 A Yes. Most of the FFT's are very complex instruments.
2 The ones we have in our lab might have as many as 200 buttons
3 on the front that allows you to do various things to the wave
4 form.

5 Q Okay. But if you didn't want to damp or filter a wave
6 form, then you didn't have to, did you?

7 A That's correct.

8 Q And you can't tell from those words in this article
9 whether or not there was any filtering at all that took place
10 in that "C" procedure?

11 A That's correct.

12 Q Then moving on to the "D", it says, "Integrated wave
13 analysis." Do you know what that is?

14 A That terminology is not normally used. I understand,
15 from reading it further on, what he did. That's not - like I
16 said, I've never seen that terminology that way.

17 Q Well, by reading further on, do you know what that is?

18 A He said it's a - it involves intensity trace of the
19 signal.

20 Q Well, did he say that that was the type of material that
21 was proffered by the court and he had to use it for some
22 purpose in this experiment - in the next sentence?

23 A He was talking about various things, yes, he had to use.

24 Q Okay. And did he go on to say that it's a rather
25 archaic procedure?

1 A Yes, sir.

2 Q Okay. Has relatively poor and inaccurate resolution of
3 a signal?

4 A Which paragraph are you referring to?

5 Q I'm looking on the same paragraph, right after "D".

6 A Okay. Well, my understanding of what that would mean
7 would be closer to what I did. Like I said, the terminology
8 is not normally used that way.

9 Q The truth of the matter is, you don't know what that
10 means, do you?

11 A Not exactly. He didn't explain it at all in this
12 article.

13 Q But it sure doesn't say anything about filtering, does
14 it, or damping?

15 A I don't--- Like I said, I never heard of the procedure
16 called that before.

17 Q Now in the paragraph after that, that you pointed to, as
18 saying "the resulting patterns provide an intensity trace of
19 the signal with the high energy wave front essentially
20 damped."

21 A Yes, sir.

22 Q Referring only to the second procedure, doesn't it?

23 A Well, okay. You're talking about the second procedure
24 or the fourth procedure? Okay.

25 Q Well, I'll just ask you to read it if you need to.

1 A Okay.

2 Q And tell me if it doesn't refer to the "B" procedure
3 that we have talked about in the paragraph above it, and only
4 to that?

5 A Yes, sir, I believe that's true.

6 Q And the "B" paragraph in the paragraph above, the "B"
7 procedure is the only one that says anything at all about a
8 damped wave?

9 A That's correct.

10 Q It would appear then, from a reading of the entire two
11 paragraphs, that he performed his experiments both with a
12 damped and undamped - both with damped and undamped
13 procedures, doesn't it?

14 A I don't think that's--- Reading this article, it's not
15 totally clear. It sounds like he did some with damped and
16 some without. But the article doesn't list the equipment and
17 exactly what he did with it, which is normally in these
18 articles. So it's difficult.

19 Q It's difficult for you to read the article and know
20 whether or not there was some filtered procedures and some
21 not?

22 A Well, I have more information that's on this. Our
23 colleagues in England called me about this article, so---
24 They called up and said---

25 Q Well, I'll object to the hearsay.

1 A Okay. Well, I have more information.

2 Q It was my understanding that you testified from your
3 reading of this article?

4 A Yes, sir.

5 Q And there's not a thing in that article that indicates
6 that all his procedures were filtered?

7 A Not in the article itself.

8 Q And you are unsure yourself as to whether or not there
9 was filtering on every single procedure?

10 A In this particular article.

11 Q Yes, sir.

12 A I - the other information I have would answer that
13 question, but it's not in the article.

14 Q Somebody in England told you something?

15 A Yeah. The police department in England called us up
16 after this paper was presented, and we also had one of our
17 colleagues there.

18 Q Well, why don't you go ahead and tell me about that?

19 A Well, they said the information was inaccurate. They
20 said their analysis with gunshots were like mine, they
21 expected the sharp spikes and everything else.

22 Q Whoa, whoa, whoa. I'm sorry. I thought you were going
23 to tell me something about whether or not the processes used
24 in here employed a filter.

25 A Oh; okay. The answer---

1 Q I don't want somebody else's opinion about somebody
2 else's process.

3 A Okay. They said the individual presenting the paper
4 didn't know, but when they pressed him he had to admit that
5 there was, you know, from their experience over there, that
6 it had to be filtered.

7 Q Had to be filtered.

8 A The wave forms were such, like I saw, that they had to
9 be filtered. Whether it was purposely done or the equipment
10 itself for some reason produced it, they didn't know.

11 Q Okay. So it's your testimony here today in this trial,
12 that all of the procedures carried out, that led to this
13 article, employed filters?

14 A No, sir. The ones involving the wave form analysis,
15 the acoustical signatures back on Pages 5 and 6. The other
16 information is not useful for doing gunshot analysis.

17 Q Now you testified further that you looked at his
18 computer wave form charts for Shot Number 4.

19 A Yes, sir. I had a copy of it.

20 Q Well, let me ask you if this is what you testified
21 about. I'll hand you a document marked Government Exhibit
22 G-48.

23 A Yes, sir.

24 Q That's what you testified from?

25 A Yes, sir.

1 Q Okay. And you examined the computer wave form chart for
2 Shot Number 4?

3 A Yes, sir.

4 Q Can you tell that that's Shot Number 4 from comparing
5 that with your visicorder printout?

6 A No, sir. This is so distorted that it's impossible to
7 compare it with anything.

8 Q Okay. Well, my question is, how do you tell that that
9 was done with a filter by looking at it?

10 A Okay. There's two things to look at. First off,
11 something might have these nice smooth lines because the
12 computer itself lacks resolution. Well, we can look at all
13 the little dots here and tell the computer certainly has a
14 resolution to be able to do that. Okay. So second, we then
15 looked at it and said, okay, it can resolve high frequencies,
16 but there's no high frequencies here. And we've got a signal
17 knowing that there's high frequencies. So we immediately
18 realized that there was no high frequencies in this signal.

19 Now whether someone purposely put a shot in front of it
20 or whether his copy was so poor that it took all of the high
21 frequencies out or the equipment itself damped it somehow, I
22 can't answer that. The end product is that there are no high
23 frequencies in this wave form; whereas, the original wave
24 form is full of high frequencies, very sharp spikes and very
25 quick up and downs, where this signal does not have that.

1 Q Okay. Are you testifying then that the only way to
2 perform this analysis is to use your kind of equipment?

3 A Well, the standard equipment used in the signal analysis
4 field; we buy the same equipment the navy uses for submarine
5 detection, the same equipment, you know, all of the other
6 government agencies and the people involved in signal
7 analysis use. It's - you know, visicorders we are using are
8 ten years old.

9 Q Pardon me?

10 A The visicorders we're using, many of them are ten years
11 old. I mean, they've been around for a long period of time.

12 Q You have several visicorders?

13 A Yes, sir.

14 Q You don't have the capability to do it with a machine
15 like this, do you?

16 A Oh, yes, sir.

17 Q Oh, you do?

18 A Oh, yes, sir.

19 Q But you don't use that?

20 A We use it sometimes. The disadvantage to that is you
21 end up with a sheet that's this long (demonstrating); whereas
22 the visicorder, you can stretch it out over many feet of paper.
23 It's much more convenient to look at.

24 Q Much more convenient?

25 A Convenient. If you want to look at a short duration

1 thing, the computer is excellent for that and we often use it
2 for that. For, like, tape recorder stop/start signals, we'll
3 often use the computer. It's more convenient.

4 Q And by some means you have to put a time code on the
5 visicorder, don't you?

6 A No, sir. We don't do that. We did that simply in this
7 case to correct for timing errors, you know.

8 Q My question is, is the time code that you put on your
9 visicorder, that you fed to the extra channel on the
10 visicorder, was essential to your measurements in this case,
11 wasn't it?

12 A Our error rate would have been wider, but it wasn't
13 essential to us making the determination.

14 Q Well, the computer wave form chart has its own built-in
15 timer?

16 A Oh; the computer, properly programmed, should be very
17 accurate, yes, sir.

18 Q And it would be much more accurate than a visicorder
19 graph, wouldn't it?

20 A You're getting - both are--- With a time code on there,
21 the accuracy, when we computed it to time, was almost the
22 same.

23 Q You found some discrepancies in your own time code, did
24 you not?

25 A No, sir.

1 Q Haven't you testified previously that you found some
2 discrepancies in your own time code, whether resulting from
3 the speed of the recorder or whatever?

4 A Oh, the time code was correct. The recorder itself will
5 vary slightly, but we just correct that by taking it off the
6 time code, which is deadly accurate.

7 Q So your testimony is that Doctor Hollien, both in the
8 study and this article, used filters?

9 A That wave form has no high frequencies in it. It was
10 filtered somehow, whether he used a filter, the recording was
11 poor quality, whether the playback was bad, whether there was
12 a glitch in his computer.

13 Q What wave form are you talking about?

14 A The wave form you just showed me on Shot 4.

15 Q Well, my question was about this article.

16 A That also does not have high frequencies. If you'll
17 look at his wave forms, they do these kind of things instead
18 of being extremely sharp (demonstrating).

19 Q Are you talking about the drawings at the back?

20 A Yes, sir.

21 Q And you have your own copy there. I forgot. Which
22 figure are you talking about?

23 A All of them. Figures 1-A, 1-B, 2-A, 2-B.

24 Q And you're saying that they don't have what?

25 A They don't have the - they don't have high frequency

1 resolution, which is extremely important in transient
2 analysis. If you did this with speech information, for
3 instance, it probably would be fine. You wouldn't have a
4 problem. It's when you look at a transient that has a
5 considerable amount of high frequencies in it that you run
6 into problems. So in other words, this program could have
7 been built for vibration or some kind of speech analysis. It
8 might be great, have no problems at all.

9 Transients as a class have to be done a certain way.
10 And the research goes back many years.

11 Q I'm just trying to understand your testimony. Are you
12 saying that the computer wave form technique utilized in this
13 article is no good for examining transient sound?

14 A I would say it would be accurate if whatever is
15 filtering the signal out could be removed, because a computer
16 should give - his graph should look exactly like my graph.
17 But if somebody else is going to take the tape and run it, it
18 ought to look exactly the same. You would expect almost no
19 differences. And that didn't happen.

20 In looking at it, the best we can tell is that all of
21 the high frequencies are gone. We can't find any high
22 frequencies in that wave form. Somehow they're gone. Now
23 where they disappeared at in the system, I can't answer that
24 question. I just don't know.

25 Q What you're saying is they don't look like your

1 visicorder charts, do they?

2 A The high frequencies are gone.

3 Q I don't suppose you brought your visicorder charts here
4 this time either, did you?

5 A Oh, I have Shot Number 4 here.

6 Q Yes, but--- The one you ran last week?

7 A Yeah. Well, it's the same as the one I had before. The
8 other ones, just from age and all, they tend to fade
9 slightly.

10 Q But you didn't bring any of your other visicorder graphs
11 to show us, did you?

12 A No, sir. But they'd look like that, with just different
13 echo patterns and everything else.

14 Q And it definitely looks different from the ones Doctor
15 Hollien ran on his computer?

16 A They look different than anybody's gunshot analysis I've
17 ever seen.

18 Q And you say that they also - it appears obvious that he
19 used a filter?

20 A Well, something is filtering the high frequencies out.
21 Whether he purposely put a filter in the system, I have no
22 idea. The end result is those wave forms have no high
23 frequencies; and the recording we have, you know, when you run
24 the thing, has lots of high frequencies. And they're the
25 important part in making the analysis.

1 Q What you mean by high frequencies is that the blip
2 doesn't go up as high, is that right?

3 A No. It's the narrowness of it, how quickly it goes up,
4 not how high it goes up.

5 Q But it's there on the chart, isn't it?

6 A I know, but to tell if something is a gunshot you first
7 off need to have that blip go up very quickly. For instance,
8 if you look at the echo on my gunshot analysis on the
9 original shot, the original shot goes up much quicker. When
10 it comes off that building, that little bit of scattering and
11 defraction we're talking about drops that a little bit. On
12 his wave forms you get a nice rounded thing, and I've got
13 four or five blips in that area, tremendously more
14 resolution. And like I said, his system, from what we can
15 tell, is very capable of running - making a wave form that
16 looks identical to ours. It's just his high frequencies are
17 gone.

18 Q Okay. When you played the tape a while ago, you slowed
19 it down four times; is that right?

20 A That was his tape; yes, sir.

21 Q When you played that tape, is what I said - that tape a
22 while ago.

23 A Yeah.

24 Q Okay. And you played Shot Number 4?

25 A Yeah. I think we played Shots 3, 4 and 5; yes, sir.

1 Q But you didn't stop and identify that shot, did you?

2 A I think we said it was the middle shot of the three.

3 Q Is it true that that shot has a number of echoes?

4 A Well, it has one major echo and a bunch of small ones.
5 Everything does, yes, sir.

6 Q A bunch of small ones?

7 A If you look at my wave form, you can see all of the
8 little blips in there.

9 Q Is it your testimony that this Shot Number 4 that you
10 ran last week looks exactly like the Shot Number 4 that you
11 ran in 1979?

12 A Well, yes, sir. I mean, exactly; exactly. The
13 equipment will make one blip a sixteenth of an inch higher or
14 something, but they'll all be in the same place.

15 Q But you're saying that it would look exactly the same?

16 A Yeah. I compared them.

17 Q Let me ask you about all these little - tell me, if you
18 would, how many echoes you see in that wave form chart.

19 A Oh, I would say a couple of thousand.

20 Q And you picked out the ones that you thought were the
21 biggest ones, didn't you?

22 A Well, Gunshot Number 4, I determined there wasn't enough
23 large echoes to make a decision about where the gunshot came
24 from.

25 Q You can hear the large echoes on the tape, can't you?

1 A Yes, sir, you sure can.

2 Q And you say that there aren't enough large echoes?

3 A Yes, sir. We need - at least I felt, to be conservative
4 about it, at least two high quality echoes to make a
5 determination if I had no other information, no visual,
6 nothing else that would assist me; and in that case we had
7 one, you know. I'm sure I could go out and try to find some
8 areas that that one echo - but there could be a lot of areas
9 that could have matched it.

10 Q You said the second sound that you hear in that Shot
11 Number 4 was a thud?

12 A Well, it's hard to describe it. It's a - you hear the
13 main gunshot, which is really made up of three or four
14 transients, and then a series of like four or five echoes
15 that are kind of medium level, close together, and then a
16 larger echo.

17 Q Okay. Now Mr. Linsin told you that Doctor Hollien had
18 testified in this trial that he could locate gunshots by
19 intensity?

20 A He said that you could make some determinations, maybe
21 not definitive, but you could make some determinations by
22 listening to the amplitude. And like I said, under perfect
23 conditions you may be able to do something, but not under
24 conditions we had out there that day.

25 Q Okay. And so it's your testimony that you can't

1 distinguish a shot that's 300 feet away from one that's 50
2 feet away?

3 A If I knew both of them were pointed in the same
4 direction and knew the type of weapon used and the direction
5 of the microphone, I could certainly tell you one was more
6 intense than the other. But without knowing that the one 300
7 feet away isn't an elephant gun and the one at 50 feet isn't
8 a .22, I couldn't make that determination and I never had
9 that kind of information to do that.

10 Q You can look at your visicorder graphs and say that one
11 shot is more intense than another, can't you?

12 A Yes, sir.

13 Q And one of the things that that tells you is that it may
14 be further away from the microphone than the less intense
15 shot, or more intense shot?

16 A It could be that, or a lower caliber, or the mikes
17 pointing the right - pointing away. It's all one of the con-
18 siderations you'd have to determine.

19 Q It's your testimony that you can't tell the difference
20 between a shot 50 feet away and one 300 feet away?

21 A Not if I didn't know the direction of the mike and the
22 caliber of the weapons involved.

23 Q But your testimony in this trial has been that you knew
24 the placement of the microphones at all times, didn't you?

25 A That's correct.

1 Q Even though it was on a tether that was some seven feet
2 long?

3 A I didn't know the direction of the microphone, but I
4 knew where it was when I was able--- Gunshots 3, 4 and 5 you
5 could do - we couldn't do as much, simply because we didn't
6 have enough echoes. When we had enough echoes we could
7 determine where the microphone was. It's a - if you know
8 where the gunshot occurred, you work back. They have to
9 match. It's a matched set. It's this plane I talk about.
10 You have to know where the microphone is, you have to know
11 where the gunshot is. When you figure out one, you figure
12 out the other.

13 Q In this case you never knew where the microphone was,
14 did you?

15 A In which particular shot?

16 Q On all the shots.

17 A Oh, that's not true.

18 Q Well, the one that was held by a separate man for the
19 cameraman on a tether.

20 MR. LINSIN: I'm just going to ask that the witness
21 be able to conclude an answer before the next posed question.

22 MR. GREESON: I thought he said, "That's not true."
23 I'm sorry.

24 BY MR. GREESON:

25 Q Did you have more to add?

1 A Yes, sir. We normally could figure out where the
2 microphone was. We'd use the visual if we had it, just to
3 get approximately where the camera was. But as you know, the
4 microphone was normally right in that - sometimes it was next
5 to the camera or was within a few feet of it. Other times it
6 was farther away.

7 Okay. Once we then took like the known shots, we could
8 say, well, we knew where the gunshot was, and here's our echo
9 pattern; therefore, the microphone had to be in a certain
10 location to match up. And, yes, we had to figure out where
11 the microphone was every time.

12 Q Did--- Within a few feet?

13 A My error rate, yes, sir.

14 Q And you're saying that four or five feet wouldn't make
15 that much difference?

16 A Oh, no, sir. You have to be within a foot or two.

17 Q You would have to be what?

18 A Within a couple of feet.

19 Q One or two feet wouldn't make that much difference?

20 A Well, we took it in as part of our error rate. Most of
21 the time we got the microphone within plus or minus a foot.

22 Q But you said you could get down to six inches.

23 A Well, a lot of times we did. It just depends, you know.
24 Some of my error rate is plus or minus five or six feet, too.

25 Q Did Mr. Linsin tell you anything about this building?

1 A He said there was a building in the middle there.

2 Q What else did he tell you about it?

3 A He asked me if it made any difference if the building
4 was there.

5 Q Okay. Did he tell you that the building was open?

6 A Yes.

7 Q He did tell you that the building was open.

8 And did he describe the cinder block, the sides that
9 held it up?

10 A He showed me a picture of it. But in the end, since the
11 echoes wouldn't go through that building anyhow, it was a
12 moot point.

13 Q Pardon?

14 A Since the echoes didn't go through that building, you
15 know, there was no echoes that could go through that building
16 anyhow.

17 Q Why is that?

18 A Because, when I explained before, the angle of where the
19 gunshot was occurring, they wouldn't hit off that - I can't
20 remember; is it Building Number 1?

21 Q Back to the pool ball?

22 A Yes. It couldn't come up that way. Any intensity would
23 be picked up at the microphone.

24 Q So your testimony is that even--- You testified that
25 the building was in the way and it couldn't do anything

1 anyway?

2 A Well, even if the building wasn't there, those echoes -
3 you're right - would not have gotten there from those other
4 two buildings.

5 Q So according to your testimony, the building doesn't
6 make any difference?

7 A Not for those two buildings, that's correct.

8 Q Did you say that this new visicorder - these two new
9 visicorder tracings you brought were made on a Honeywell
10 visicorder, Model 8106-A?

11 A 1806-A.

12 Q 1806?

13 A 1806-A.

14 Q And is that a new one?

15 A We've had the unit for at least seven or eight years.

16 Q This was the same one you used on this analysis?

17 A We used it - see, that puts out six-inch wide paper,
18 some of our stuff. Most of the stuff is done on twelve-inch
19 wide, so you can have the time code on there.

20 Q In testifying about G-51, this one that you say has all
21 the good stuff filtered out of it---

22 A I didn't word it that way. It only has low frequencies
23 in it.

24 Q It only has low frequency sounds?

25 A Yes, sir.

1 Q They go up above the line pretty high, don't they?

2 A Frequency has nothing to do with amplitude.

3 Q Amplitude means how high the blip goes?

4 A Amplitude is volume, how loud it is.

5 Q Okay. And you say you did this to approximate
6 Doctor Hollien's work?

7 A Well, just to show that a filter of that type - you
8 know, he was using a stronger cutoff computer filter. It's
9 obvious from how the wave forms are kind of symmetric.
10 They're not - they should be a little bit more symmetric than
11 they are. It's a stronger cutoff, computer filter. Well,
12 there's hundreds of those available. Given time we could
13 probably match it. Like I said, when you run a transient
14 through a filter, you tend to see more about the filter than
15 you do about the transient.

16 Q At any rate, you brought this visicorder tracing that
17 you put some kind of filter on?

18 A Yes, sir.

19 Q To compare with Doctor Hollien's computer wave form?

20 A Well, it's to show what happens when you go through a
21 filter of generally that type.

22 Q But you said that you did G-51 so you could compare it
23 with Doctor Hollien's, didn't you?

24 A Well, what we tried to do is, we tried to generate a
25 wave form, since we knew the high frequencies weren't there,

1 as close as possible to Professor Hollien's wave form.

2 Q Well then, why didn't you run it on a computer wave form
3 so you could really compare?

4 A That wouldn't make any difference.

5 Q It would make a whole lot of difference in what the wave
6 form looked like, wouldn't it?

7 A No, sir.

8 Q I beg your pardon?

9 A No, sir. A visicorder - most laboratories of the type
10 of our stuff still prefer the visicorder over the computer.

11 Q I think you must not understand my question.

12 MR. GREESON: May I approach the witness, Your
13 Honor?

14 BY MR. GREESON:

15 Q I'm showing you once again what's been marked
16 Government's Exhibit G-48. I'll ask you if the computer wave
17 form doesn't look a great deal different from your visicorder
18 wave form?

19 A I mean other than the dots that's not filled in,
20 basically it's a picture of a wave form, like I said, a low
21 frequency wave form.

22 Q Okay. And my question to you is, if you had run your
23 test on the same kind of machine, then you would have been
24 able to compare a computer wave form against a computer wave
25 form and show us the difference, wouldn't you?

1 A There wouldn't be any difference. We've run both the
2 computer and the visicorder. They look identical. It's
3 just, you know, the computer has certain advantages and the
4 visicorder has certain advantages.

5 MR. GREESON: Mr. Porter?

6 MR. PORTER: Yes?

7 MR. GREESON: Could you come and help me just one
8 second?

9 If you would just hold that much of it
10 (indicating). I want you to show it to Mr. Koenig, too.

11 BY MR. GREESON:

12 Q Mr. Koenig, what I'm showing you one more time is
13 Government's Exhibit G-48, which is the computer wave form
14 done by Mr. Hollien---

15 A Okay.

16 Q ---that you say is obviously filtered.

17 A Well, it has no high frequencies in it, so obviously the
18 high frequencies are attenuated somewhere.

19 Q That you say is obviously filtered---

20 A Well---

21 Q ---or damped?

22 A Well, it has to be. The high frequencies are gone.

23 Q Well, is the answer yes or no? Is it damped or
24 filtered, or is it not?

25 A Well, you know, I don't know if a filter was used. The

1 high frequencies are gone, which is a filtering action. Now
2 whether a filter was put in front of it or not, I don't know.
3 The system could have generated it.

4 Q And then this Exhibit G-51 here that you brought with
5 you is a visicorder tracing that you say that you damped so
6 that you could compare it with this G-48; is that right?

7 A To show what happens to a filtering of the same general
8 type that he used, yes, sir.

9 Q And your testimony is that those two tracings look
10 alike?

11 A Generally, yes, sir.

12 Q Generally alike?

13 A Except his are more distorted and they're more symmetric,
14 which is caused by the type of filter he used.

15 Q What did you use to filter your visicorder wave form?

16 A I used an Ithaco, that's an I-t-h-a-c-o, 4210,
17 electronic filter.

18 Q Excuse me. I didn't get that. Would you do that one
19 more time, slowly?

20 A That's Ithaco, I-t-h-a-c-o, 4210, electronic filter,
21 which has a six pole Butterworth filter.

22 Q With a six pole, p-o-l-e?

23 A Pole, Butterworth filter, with adjustable third octave
24 filter settings.

25 Q Adjustable third optic?

1 A Octave, octave. And I used two of those.

2 Q What was the last - third octave what?

3 A Third octave filter adjustments.

4 Q And you used two of them?

5 A Two of them, yes.

6 Q Now you said you tried a whole bunch of buildings so you
7 could approximate what he did?

8 A Well, we could approximate where his filter cutoff was.
9 But again, he was using computer filters. Computer filters
10 cut off much more sharply than normal filters. So what
11 happens is, in a computer that's necessary. In analyzing
12 regular tapes with voice information, it tends to distort the
13 voice information somewhat. So we tend not to use those
14 except on the computers we have in our laboratory.

15 Q All right. I'm really interested to hear you say that
16 the actual event of November 3rd, 1979, was your test
17 firings. And I didn't understand exactly what you meant.

18 A Well, test firings - you do test firings to determine
19 what happens in a particular area with that particular tape
20 recorder, that particular weapons, with the cars in the
21 location they are, and the particular temperature and
22 humidity. Okay.

23 On this one we have visual information of particular
24 people shooting. We can see where they're standing, we can
25 see them shoot, the best test firings you can have in the

1 world. They're right at the site. Nobody has moved. All of
2 the cars are in the same location. The temperature is going
3 to be the same. It's perfect conditions. You couldn't ask
4 for it any better.

5 Q So when you get right down to it, your testimony is that
6 without all that visual information, you couldn't do what you
7 did, could you?

8 A That's an interesting question. We might have gone out
9 and done test firings afterwards, and our error rates might
10 have been wider.

11 Q What you have done in this case, Mr. Koenig, is take
12 your knowledge of acoustics and engraphed it in some way upon
13 your knowledge of - what's that word? - photogrammetrics and
14 bolstered a photogrammetrics opinion gained from the
15 videotape---

16 A No, sir.

17 Q ---with acoustical information?

18 A No, sir. I did it absolutely--- The visual information
19 was there, we used and it was helpful. But many of the
20 shots, like over at the Morningside Homes, we had no visual
21 information whatsoever.

22 Q I know you had no visual information on some of them.
23 My question to you is, you used photogrammetric principles in
24 the first instance to locate those shots for which you had
25 visual information, didn't you?

1 A We used any information we could get, yes, sir.

2 Q That's right. And you previously testified that you
3 didn't use visual information at all, except with respect to
4 Shots 15 and 19, isn't that correct?

5 A No, sir.

6 Q At any rate, you located a shot or two or three by
7 visual information?

8 A Yes, sir. We took the visual ones that we could see
9 where the people's feet were standing exactly, we could see
10 them firing, we identified the wave form, and then used that
11 to determine if the system worked. We knew the theory was
12 correct. It's whether the tape recorder--- Like for
13 instance, Channel 2 somewhat distorts the wave form.
14 Channel 2 was not, you know, very good. Channel 11 was the
15 only one we could do a full examination on. Well, if
16 Channel 11 looked like Channel 2, the end result was - we
17 might have only been able to say how many gunshots there were
18 and make no determination of where they were located.

19 And if that was true, and we couldn't back it up with
20 the visual and the audio both, we would have left it to the
21 photometrics people to do the examination. We used whatever
22 visual information there was obvious. But some of it was
23 deceiving to us. We thought people were in a certain place.
24 The woman in the yellow raincoat, we thought she was 30 feet
25 in front of where she was when we originally did the exam.

1 And the acoustical evidence wouldn't work. We kept fitting
2 them in and it wouldn't work. We started backing her up, and
3 we found a place where all of the sudden, wham, it fit per-
4 fectly.

5 So the visual information that was there was helpful,
6 very helpful at times, certainly; but if it didn't match the
7 acoustical information we had, then we knew we had a problem.
8 We knew we had placed them wrong on the chart.

9 Q I'm not a very good artist, and I don't know whether I
10 can illustrate this - and I won't take much time. Can you
11 see this from there?

12 A Yes, sir.

13 Q Would it help if I set this down? Is that in your way?

14 A No, that's not in my way.

15 Q This is a very rough representation of the intersection
16 of Everitt and Carver, and of course I've got this hump too
17 big. But you got some visual information down here, did you,
18 from the camera, that showed you that somebody down here
19 obviously fired a shot?

20 A I think there was an individual in a blue jean jacket
21 that fired a couple of shots. He was standing on the
22 sidewalk.

23 Q Okay. And you took that visual information and you
24 looked at your wave forms for those shots, as they occurred
25 in the recording, right? In other words, if you called it

1 Shot Number 19 or 20, or whatever it was, you looked that up
2 on your wave form and then you had an approximation of where
3 it was and you went ahead and measured it out?

4 A Okay. Those two shots down there, we didn't have an
5 approximation. We could actually see where his feet were
6 standing on the sidewalk, so we could match it. And we would
7 expect to have very limited---

8 Q Well, I'm not talking about 19 now; that was the wrong
9 one to use. I'm talking about a higher number, where it was
10 maybe in the middle of the street or - but you could still
11 see a person with a gun. And then you took your echoes and
12 you measured them out and you made them fit to where you saw
13 him, didn't you?

14 A No. Like I said, we had cases - like that girl in the
15 yellow raincoat, where they didn't fit where we thought they
16 were.

17 Q Well, that's because she was back in the background and
18 the video distorted it?

19 A Well, that showed the acoustical evidence disagreed with
20 what we thought was the visual information, and we said,
21 "We've got a problem."

22 Q Well, that's what I'm getting to. You had other shots
23 that you didn't have any visual for at all, didn't you?

24 A That's correct.

25 Q And you took measurements from your visicorder wave

1 forms?

2 A That's correct.

3 Q And you got what you called the major echoes bouncing
4 off of things?

5 A Yes, sir.

6 Q Whether it be cars, brick buildings, airplanes over -
7 whatever it was that you bounced them off of. You had these
8 major echoes.

9 A Well, major echoes wouldn't be off things like airplanes
10 flying over, but - they were mostly buildings.

11 Q And because you had a bunch of people down here that you
12 could see on video, that's where you started, wasn't it?

13 A We did the - I guess the last shots we did were at the
14 Morningside Building. We had no visual at all on them. But
15 they had to verify it. Like I said, a lot of times we
16 thought we saw a guy with a gun and it looked like he fired,
17 and we'd go back and discover there was no acoustical evi-
18 dence that he fired---

19 Q Right. But my question was, that's where you started,
20 because you had all of this visual?

21 A We took anything where we saw a person actually - see
22 the smoke come out of his gun, and we could--- We took the
23 easy ones first, the woman in the yellow raincoat, which
24 ended up not being as easy as we thought. And the man on the
25 sidewalk, firing, because we could see exactly where his feet

1 were, so we couldn't be fooled. And then a few others, like
2 I said, where we could actually see the person firing and
3 smoke coming out of the gun.

4 You know, just because a person looked like he fired,
5 doesn't mean they did. And we did those first. And then the
6 ones that we could not see at all, we had to started working
7 around. And we'd just go on the map and say, "Well, could
8 it be here?" And the Morningside Homes took us - gee, it
9 took over two weeks to figure out where those--- We knew
10 they were somewhat alike in characteristics, so we knew they
11 were going to be from some particular area, but we didn't
12 know where it was. So we started putting a spot here and
13 saying, "Gee, would this fit?" And it didn't. And we just
14 kept moving around until we finally found it.

15 Q Did you get any major echoes off of this building here,
16 this 1700-A Carver Building?

17 A Yes, sir. Many echoes.

18 Q Many major echoes off that building. There was another
19 building over here, wasn't there?

20 A The Morningside Homes Rec Building, I believe.

21 Q Yes. Did you get some major echoes off of that?

22 A Yes, sir.

23 Q And when you had some visual down here and you saw that
24 there were a bunch of people down here with guns in their
25 hands, you took your measurements and your wave form chart

1 and you started here and you saw that the echoes would work
2 here, and if they did you called it there, didn't you?

3 A No, sir.

4 Q Well, wait a minute. I don't think you understood my
5 question. If you saw - you saw some people down here, you
6 took your wave form measurements and you measured them out.
7 And if the echoes matched with somebody down in this area,
8 then you placed it there, didn't you?

9 A No, sir. We actually looked at any other set of echoes
10 that could have also produced the same area. So we looked at
11 echoes - we were looking down in the right area, where you're
12 pointing out. We also ran tests down over in the left area,
13 where we could get major echoes off buildings, seeing if
14 there was any place we could place them down there.

15 Now we went--- That's why the exam took so long. If
16 you did what you said, I could have cut months off my exami-
17 nation. But I never would have been sure there wasn't
18 someplace else on the map that that gunshot could have come
19 from. And I did not want that to happen.

20 Q So your testimony now is that you're absolutely sure
21 that there's no place else they could have come from?

22 A Those 39 gunshots? Well, you mean where I placed them?

23 Q Yes, sir.

24 A They're placed accurately; yes, sir.

25 Q And you can't be wrong, can you?

1 A I've been wrong before, but I wouldn't be in here
2 testifying about this. It was certainly checked by my asso-
3 ciates and everything else in this case.

4 Q But in your opinion, you can't be wrong in this case,
5 can you?

6 A I am not wrong in this case.

7 Q Thank you.

8 THE COURT: Do you have much more, Mr. Greeson?

9 MR. GREESON: Your Honor, if I could have just a
10 second, I can tell you how much more.

11 THE COURT: All right.

12 MR. GREESON: Your Honor, it appears that I have
13 probably ten or fifteen minutes in all, but other counsel
14 have some questions that they wish to ask also, and I can't
15 represent to Your Honor that - you know, that we could be
16 through in a short while.

17 THE COURT: All right. We'll adjourn. I can't
18 keep the jury any later than this. Let's resume at the same
19 time tomorrow morning. Don't discuss the case.

20 (Jury out at 6:05 P.M.)

21 (Proceedings were adjourned for the day, to be
22 reconvened at 9:00 o'clock A.M., April 5, 1984.)

23 - - - - -

24

25

1 April 5, 1984

2 9:25 o'clock A.M.

3 THE COURT: Good morning.

4 ALL DEFENSE COUNSEL: Good morning, Your Honor.

5 GOVERNMENT COUNSEL: Good morning, Your Honor.

6 THE COURT: No preliminary matters? We're ready to
7 proceed?

8 MR. KEITH: Your Honor, just one thing. ~~Can~~ May we
9 approach the bench and make a proffer?

10 THE COURT: All right.

11 (Bench conference on the record.)

12 MR. KEITH: Your Honor, I would make a motion to
13 reopen Dawson's evidence in regard to one witness, Lieutenant
14 Ford. He was under subpoena; he was interviewed by me. If
15 allowed to testify, he would testify very briefly to the fact
16 that he had a conversation with Mr. Dawson, the result of
17 which he contacted Colonel Birch of the Greensboro Police
18 Department in reference to the Nazi/Klan caravan. It's
19 already in evidence by Mr. Cooper, if you remember his testi-
20 mony. It would be very brief.

21 He would also say that the day of the shooting,
22 November 3rd, he called Mr. Dawson at home afterwards. I
23 believe that is already in his admissions read in by Mr.
24 Bell. The reason he was not here, he was contacted by me, I
25 believe Monday morning he was contacted by the Clerk. He had

1 already left for a business meeting in Charleston, South
2 Carolina. Called him Monday night in Charleston and he told
3 me he could not return here until Friday. And unexpectedly,
4 he returned. My client called me last night at 10:30 and
5 informed me that he wanted him to testify. So that's why
6 I'm---

7 THE COURT: Well, if I follow you correctly, his
8 testimony would be similar, in any event, to something that's
9 already been testified to?

10 MR. KEITH: In all respect to the Court, that's
11 absolutely correct. There would be nothing--- It would be
12 first-person testimony, but - excluding the hearsay. I
13 assume the government would not allow it to get in; he would
14 testify to things which are already in the record.

15 THE COURT: Well, I'm going to deny the request.

16 MR. KEITH: All right.

17 THE COURT: Because it's cumulative, and I won't go
18 into any of the other reasons. All right.

19 MR. BELL: Your Honor, I have another matter. I
20 don't think the government yet has a problem, but I wanted to
21 apprise the Court and the defense of it. We have under
22 subpoena Billy Joe Franklin, Jr., the son of Billy Joe
23 Franklin, who was a caravan member. Now he has repeatedly,
24 and his mother, expressed their extreme unhappiness with his
25 having to be here to testify. He did show up yesterday

1 pursuant to the subpoena, because we thought we were going to
2 get to him yesterday; and we asked him to return this
3 morning.

4 He has advised that he--- He didn't show up when
5 he was supposed to, but he has advised the Marshals,
6 apparently, that he had some car trouble. And I gather that
7 he is now on his way again. I don't think it's a situation
8 that calls for a bench warrant, but I just wanted to advise
9 the Court that, you know, he is a reluctant witness, one that
10 does not want to testify. And if he doesn't show up shortly,
11 I will ask the Court for a bench warrant on it.

12 THE COURT: All right. Where does he live?

13 MR. BELL: He lives in the Charlotte area.

14 THE COURT: Well, if he's in Charlotte and he
15 hasn't started, it will take some time to get him here.

16 MR. KEITH: He is what, a fourteen-year-old boy?

17 MR. BELL: He's sixteen now, I think. Fifteen,
18 sixteen.

19 THE COURT: Well, have your people tried to contact
20 him this morning?

21 MR. BELL: Yes, sir.

22 THE COURT: And what was the word from Charlotte?

23 MR. BELL: The word is that he was on his way. And
24 the problem is, I don't really trust him.

25 THE COURT: You don't know where he's on his way

1 to?

2 MR. BELL: Yes. I have no doubt he's on his way
3 somewhere.

4 THE COURT: All right. Okay.

5 (End of bench conference.)

6 (Jury in at 9:30 A.M.)

7 THE COURT: Good morning, ladies and gentlemen.

8 THE JURORS: Good morning.

9 THE CLERK: Return to the witness stand, please.
10 You've previously been sworn.

11 BRUCE E. KOENIG, GOVERNMENT'S WITNESS, PREVIOUSLY
12 SWORN.

13 CROSS EXAMINATION (CONTINUING)

14 BY MR. HALL:

15 Q Good morning, Mr. Koenig.

16 A Good morning.

17 Q I want to ask you a few questions about the test firing
18 that you indicated were for the ones actually seen, I believe,
19 during the actual event that's at issue in this case.

20 Did I understand your testimony correctly that you said,
21 "We have visual indications of particular people shooting"?

22 A Yes, sir. You can see a particular person shooting a
23 weapon and actually see the smoke coming out of the end of
24 the barrel.

25 Q Right. And you can see where they were standing and can

1 actually see them firing? That's what you're talking about?

2 A Yes, sir.

3 Q And did you say, did you testify - and these are my
4 notes, and it may not be literally correct - "We took
5 anything where we saw individuals with smoke coming out of
6 the gun?" And you said, "Just because a person looked like
7 he fired, didn't mean that he actually did"?

8 A Well, I think I really had two different statements.

9 Q Right.

10 A We certainly did with smoke coming out of a gun. But at
11 times when it looked like somebody actually shot a weapon,
12 you know - I mean, just had a weapon in his hand, and he
13 looked like he was trying to shoot it, didn't necessarily
14 mean he did.

15 Q Right. Now do you--- You're familiar with the report
16 you prepared on the 39 shots, are you not, sir?

17 A Yes, sir. Do I need to refer to it?

18 MR. HALL: Well, may I approach the witness, Your
19 Honor?

20 THE COURT: All right.

21 BY MR. HALL:

22 Q I'm not going to have this marked, but see if you
23 recognize that as a copy of the report you prepared.

24 A Well, it's part of my report.

25 Q Well, I mean that is a part of it, isn't it?

1 A Yes, sir.

2 Q Now I want to invite your attention to Shot Number 6.
3 It's correct, sir, that the Channel 11 video time shown on
4 that report for Shot Number 6 is 12:11:14, is that correct?

5 A That's correct.

6 Q And you indicate on that that it is probably a
7 supersonic gunshot, probably fired by the bearded white male
8 in a white sweater or shirt and dark trousers, seen firing
9 Gunshot Number 10 with a shoulder weapon on his shoulder?

10 A That's correct.

11 Q Do you recall that at 12:11:14 on Channel 11 tape that
12 you can see that man at that point?

13 A Well, if I said probably, I didn't. I can look at my
14 notes to check it further.

15 MR. HALL: Mr. Keith, would you help me, please?

16 I would like for you to go to 12:11---

17 MR. LINSIN: Sir, at this point I am going to
18 object. This is well beyond the scope of this witness's
19 direct.

20 THE COURT: This is beyond the scope of the
21 rebuttal. We've been all through his direct testimony
22 previously. Now this is just to rebut - the purpose of the
23 witness being called at this time is to rebut what Doctor
24 Hollien said.

25 MR..HALL: Yes, sir. But he testified when

1 Mr. Linsin was questioning him that his test firings - that
2 he saw a number of individuals actually firing guns, and he
3 repeated that this morning, and I want to ask him about some
4 specific shots.

5 THE COURT: I know, but we've been all through that
6 in his direct testimony. You can't repeat his testimony and
7 go through all that again. He's called here for a limited
8 purpose, namely, to rebut what Doctor Hollien said in his
9 testimony, and that's the sole purpose of rebuttal.

10 MR. HALL: Your Honor, I'm not attempting to go
11 over the government's case in chief again.

12 THE COURT: Well, what did Doctor Hollien say that
13 would cause you to be able to go into this? How is this
14 rebuttal to what Doctor Hollien said?

15 MR. HALL: It's not rebuttal. I'm not here to
16 rebut. He testified on direct examination yesterday that he
17 utilized test firings at the actual scene from these video
18 tapes, that you couldn't get a better test firing, and he
19 testified when Mr. Linsin was asking him the question, that
20 he actually saw individuals fire guns and saw smoke.

21 THE COURT: Yes. But that doesn't open up the
22 opportunity for you to go all through individuals he may have
23 seen doing certain things. That's all been gone into in an
24 earlier--- I'm going to sustain the objection.

25 All right.

1 MR. HALL: I'm not going to be allowed to ask him
2 about any test firings? \

3 THE COURT: You're not going to be able to go
4 through these videotapes again and go all through that.
5 We've been through that.

6 MR. HALL: Well, then I'm limited to what--- Can I
7 ask him about what's on his report?

8 THE COURT: All right. Go ahead.

9 BY MR. HALL:

10 Q Mr. Koenig, isn't it true, sir, that 12:11:14 you do not
11 see anybody firing a weapon on Channel 11?

12 A That must be true, because I would have said that I saw
13 him, and I said "probably," so you probably see that
14 individual at that position very shortly thereafter.

15 Q All right. So, all right, you agree with me that at
16 12:11:14 you do not see anybody firing a weapon?

17 A Yes, sir.

18 Q Then look at Gunshot Number 9, which I think according
19 to your report is 12:12:16.

20 MR. LINSIN: Your Honor, again I object. I think
21 this is to the same effect, except we're going to go through
22 the notes instead of setting up the videotapes.

23 MR. HALL: Your Honor, it's cross examination.

24 THE COURT: I know it's cross examination, but your
25 cross examination is limited.

1 MR. HALL: All I know is what Mr. Linsin asked him
2 on direct examination. I'm not going beyond the scope of
3 that, sir.

4 THE COURT: How much more do you have?

5 MR. HALL: About four or five questions.

6 THE COURT: All right. Go ahead. Let's get
7 through the thing.

8 MR. HALL: Thank you.

9 BY MR. HALL:

10 Q Gunshot Number 9 is at 12:12:16 on the Channel 11 video
11 time line, is that correct?

12 A Yes, sir.

13 Q I'll ask you, sir, if it isn't true that at 12:12:16 on
14 Channel 11 you do not see anyone, let alone the bearded white
15 male in the white sweater, firing a gun?

16 A Not at that instant, that's correct.

17 Q All right. Then the next shot is Shot Number 10, which
18 is at 12:13:15, according to the Channel 11 time line. At
19 that time, sir, is it your recollection that you can see a
20 bearded white male firing a gun and smoke coming out of the
21 barrel?

22 A Again, not at that instant; no, sir.

23 Q Sir?

24 A No, sir.

25 Q At Shot Number 10 you do not see smoke coming out of the

1 barrel, is that your recollection?

2 A Not at that instant, no, sir.

3 Q Well, do you see it an instant before or an instant
4 after 12:13:15?

5 A I'd have to look that up in my notes.

6 Okay. I see that gunshot being fired.

7 Q You see smoke coming out of the barrel at Shot---

8 A I don't remember that. My notes just say I saw the
9 gunshot being fired.

10 Q Well, do you recall whether - you do not recall whether
11 you saw smoke or not?

12 A No, sir.

13 Q Well, could it be a case of someone aiming and not
14 firing?

15 A Well, everything would be verified by the acoustical
16 evidence anyhow. So if I looked at a picture and I thought
17 the person fired, I would go back over the acoustical
18 evidence. And if it didn't show a gunshot from that
19 position, I would realize the person did not fire.

20 Q Then this may not be one of the actual shots you used as
21 a test firing?

22 A I don't think it was. We used a number of other shots a
23 little, I think, earlier on.

24 Q Well, is it correct to say that unless you saw smoke
25 coming out of the barrel, you didn't consider that a test

1 firing?

2 A Yes, sir.

3 Q All right. Now look at Shot Number 13, Channel 11 video
4 time 12:20:04. Was that a test firing, namely, where smoke
5 was seen coming out of the barrel?

6 A I don't list it. It just shows that the individual
7 fired the weapon there.

8 Q So that may have been one where the individual was
9 merely aiming and not smoke coming out of the barrel and,
10 therefore, would not be a test firing?

11 A Well, certainly a gunshot occurred there. I don't
12 remember if we used that as one of the particular test shots
13 or not.

14 Q Well, it wasn't my purpose to go over all of the echo
15 information, and I'm not trying to cut off your answer. But
16 I want to know if Shot Number 20 - excuse me - Shot Number 13
17 was a test firing, namely, if smoke was seen by you on the
18 videotapes, coming out of the barrel at the time - at
19 12:20:04 on Channel 11.

20 A I don't believe it was, no, sir.

21 Q All right. That's all I have, Your Honor.

22 May I have my copy?

23 THE COURT: Is that all?

24 MR. GREESON: Yes, Your Honor. After reviewing my
25 notes, I found that I need not ask any more questions.

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THE COURT: All right, sir.

Anything further?

MR. LINSIN: Nothing further, Your Honor.

THE COURT: All right. Let me see counsel at the
bench.

You may step down.

(Witness excused.)

I N D E X

<u>WITNESS</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>REXCROSS</u>
Bruce E. Koenig	361	402		

DEFENSE RESTS: Page 361

E X H I B I T S

<u>GOVERNMENT'S</u>	<u>MARKED FOR IDENTIFICATION</u>	<u>REC'D INTO EVIDENCE</u>
G-52 - Paper authored by Doctor Hollien and Mr. J. W. Hicks	410	

CERTIFICATE

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter.

Jo Ann M. Snyder

June 25, 1984

Jo Ann M. Snyder
Official Court Reporter

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Memorandum



Exec AD Adm. _____
 Exec AD Inv. _____
 Exec AD LES _____
 Asst. Dir.:
 Adm. Servs. _____
 Crim. Inv. _____
 Ident. _____
 Insp. _____
 Intell. _____
 Lab. _____
 Legal Coun. _____
 Off. Cong. & Public Affs. _____
 Rec. Mgnt. _____
 Tech. Servs. _____
 Training _____
 Telephone Rm. _____
 Director's Sec'y _____

To : [redacted]
 From : [redacted]
 Subject : GREENKIL

Date December 23, 1983

b6
b7C

On December 19, 1983, Department of Justice Attorney [redacted], defense attorneys [redacted] of Forensic Communication Associates, Gainesville, Florida, and SA [redacted] met at Federal Bureau of Investigation Headquarters regarding some of the scientific tests performed in captioned matter. The defense attorneys were given a copy of a scaled map showing vehicle locations as plotted by SA [redacted] of the Laboratory Division and also allowed access to the visicorder charts prepared by SA [redacted].

b6
b7C

The defense attorneys and the individuals from Forensic Communication Associates were very displeased that Attorney Linsin would not allow SA [redacted] to produce his notes and other charts, nor permit him to explain his scientific methodology.

RECOMMENDATION: None. For information only.

- 44-81521
 1 - Mr. Revell
 Attn: [redacted]
 Room 5131
 1 - Mr. Geer
 Attn: [redacted]
 Room 3457
 1 - [redacted]
 1 - [redacted]
 1 - [redacted]
 1 - [redacted]
 ② - [redacted]

b6
b7C

BEK:kk (9)

11/13/79

Judge Webster:

In relation to the civil rights investigation in Greensboro, North Carolina, the funeral march was held on 11/11/79, without acts of violence. However, approximately 36 persons were arrested and charged with weapons-oriented violence by local authorities.

Full domestic security investigations have been authorized against the Klan in Greensboro, the National Socialist Party of North Carolina (Nazis) and the Workers Viewpoint Organization (WVO), who were involved in the Greensboro violence.

In addition, there are 4 other full investigations currently authorized against the Klan, in addition to the Klan group in Greensboro, as well as 12 full investigations of individual Klan leaders throughout the country.

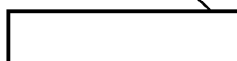


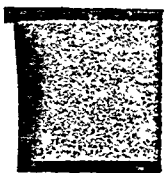
F. M. Mullen, Jr.

- 1 - Mr. Colwell
- 1 - Mr. Steel





original held
for 



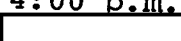
DO-6

OFFICE OF DIRECTOR
FEDERAL BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE

- Mr. Boynton _____
- Mr. Colwell _____
- Mr. Moore _____
- Mr. Bailey _____
- Mr. Bayse _____
- Mr. Cregar _____
- Mr. Herndon _____
- Mr. Joseph _____
- Mr. Long _____
- Mr. Mintz _____
- Mr. Mullen
- Mr. Otto _____
- Mr. Stames _____
- Mr. Bruemmer _____
- Mr. Hotis _____
- Mr. Roin _____
- Mr. Steel _____
- Tele. Room _____
- Miss Devine _____

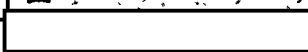
11/6

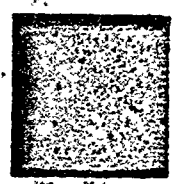
Judge:

I subsequently had two calls from Congressman Preyer's Office indicating that the Congressman was very anxious to talk to you personally. I suggested they try to call back after 4:00 p.m. Did you want  to attempt to find out if he can be of assistance to Congressman Preyer. It is no doubt in connection with the Greensboro matter.



Mayor concerned about funeral Sunday. funeral permits to be granted

may be real 



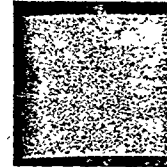
OFFICE OF DIRECTOR
FEDERAL BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE

11/6

Judge:

Congressman Richardson Preyer from North Carolina called this morning. He said he was the Congressman covering the Greensboro district and wanted you to know how delighted and pleased he was that you had taken such swift action in sending the FBI to investigate the incident in Greensboro this past weekend. He wanted you to know that he was available to furnish any necessary assistance from the local police or the city administration that was necessary in order to conduct a positive investigation.

- Mr. Boynton _____
- Mr. Colwell _____
- Mr. Moore _____
- Mr. Bailey _____
- Mr. Bayse _____
- Mr. Cregar _____
- Mr. Herndon _____
- Mr. Joseph _____
- Mr. Long _____
- Mr. Mintz _____
- Mr. Mullen _____
- Mr. Otto _____
- Mr. Stames _____
- Mr. Bruemmer _____
- Mr. Hotis _____
- Mr. Roin _____
- Mr. Steel _____
- Tele. Room _____
- Miss Devine _____



DO-7

FROM
OFFICE OF DIRECTOR, FEDERAL BUREAU OF INVESTIGATION
TO
OFFICIAL INDICATED BELOW

2/7

- Mr. Colwell _____ ()
- Mr. Boynton _____ ()
- Mr. Moore _____ ()
- Mr. Bailey _____ ()
- Mr. Bayse _____ ()
- Mr. Cregar _____ ()
- Mr. Herndon _____ ()
- Mr. Joseph _____ ()
- Mr. Long _____ ()
- Mr. Mintz _____ ()
- Mr. Mullen _____ (✓)
- Mr. Otto _____ ()
- Mr. Stames _____ ()
- Mr. Bruemmer _____ ()
- Mr. Hotis _____ ()
- Mr. Roin _____ ()
- Mr. Steel _____ ()
- Tele. Room _____ ()
- Miss Devine _____ ()

Please give me an update on our Klan coverage

ASAP

- See Me _____ ()
- Note and return _____ ()
- Prepare reply and return for my signature _____ ()
- Please Handle _____ ()
- Respond over your signature _____ ()
- Prepare memo for the Department _____ ()
- For your recommendation _____ ()
- What are the facts? _____ ()
- Hold _____ ()

Remarks: _____

Exec AD Adm. ___
 Exec AD Inv. ___
 Exec AD LES ___
 Asst. Dir.:
 Adm. Servs. ___
 Crim. Inv. ___
 Ident. ___
 Intell. ___
 Laboratory ___
 Legal Coun. ___
 Plan. & Insp. ___
 Rec. Mgnt. ___
 Tech. Servs. ___
 Training ___
 Public Affs. Off. ___
 Telephone Rm. ___
 Director's Sec'y ___

NO09

RA

RALLY DEATHS

GREENSBORO, N.C. (AP) -- THE U.S. JUSTICE DEPARTMENT, ACTING UNDER ORDERS FROM PRESIDENT CARTER, IS EXPANDING ITS INVESTIGATION OF SATURDAY'S SLAUGHTER AT AN ANTI-KLAN RALLY AS ORGANIZERS OF THE DEMONSTRATION PREPARE TO MOURN THEIR DEAD.

POLICE CONTINUED TO SEARCH FOR AT LEAST ONE MORE SUSPECT AND A WHITE FORD COMPACT, WHICH WAS SEEN IN A VIDEO TAPE OF THE SHOOTING.

MEANWHILE, 14 MEN CHARGED IN THE SHOOTINGS WERE ORDERED HELD WITHOUT BOND AFTER A JUDGE TERMED THEM "IMMINENTLY DANGEROUS TO OTHERS IN THE COMMUNITY." A PROBABLE CAUSE HEARING WAS SET FOR NOV. 20.

THE MEN SANG "ONWARD CHRISTIAN SOLDIERS" AND "GOD BLESS AMERICA" OUTSIDE THE COURTROOM OF GUILFORD COUNTY CHIEF DISTRICT JUDGE [REDACTED]. THEY WERE LED INTO COURT HANDCUFFED TOGETHER IN PAIRS.

b6
b7c

TWELVE OF THE DEFENDANTS FACE AN ADDITIONAL MURDER COUNT, POLICE SAID, FOLLOWING THE DEATH MONDAY OF ANOTHER SHOOTING VICTIM, DR. MICHAEL NATHAN OF DURHAM.

AT THE WHITE HOUSE, PRESS SECRETARY JODY POWELL SAID CARTER HAD DIRECTED THE ATTORNEY GENERAL TO COOPERATE IN THE INVESTIGATION, AND THE JUSTICE DEPARTMENT HAD ESTABLISHED A SPECIAL UNIT TO INVESTIGATE THE VIOLENCE, DISPATCHING TWO DOZEN FBI AGENTS TO THE SCENE.

"THE RESURGENCE OF THE KLAN IS A MATTER OF CONCERN TO THE PRESIDENT," POWELL SAID.

POLICE CHIEF WILLIAM E. SWING SAID SIX OF THE SUSPECTS IDENTIFIED THEMSELVES AS MEMBERS OF THE KU KLUX KLAN AND THREE SAID THEY WERE MEMBERS OF NAZI GROUPS.

THREE WHITE MEN AND A BLACK WOMEN WERE KILLED SATURDAY AT A "DEATH TO THE KLAN" RALLY ORGANIZED BY THE COMMUNIST WORKERS PARTY, U.S.A. NINE OTHER PERSONS WERE INJURED WHEN GUNMEN DROVE UP TO THE RALLY AND OPENED FIRE. TWO REMAINED HOSPITALIZED ON MONDAY.

SWING SAID A FIFTH MURDER COUNT WOULD BE FILED AGAINST THE 12 MEN NOW CHARGED WITH FOUR COUNTS OF FIRST-DEGREE MURDER AND A CONSPIRACY COUNT. TWO OTHERS ARE CHARGED ONLY WITH CONSPIRACY TO COMMIT MURDER. SWING SAID POLICE HAVE CONFIRMED THAT "SEVEN OR EIGHT" CARS ASSOCIATED WITH THE ATTACKING GUNMEN DROVE THROUGH THE AREA OF THE RALLY. ALL BUT TWO HAD LEFT THE SCENE WHEN THE SHOOTING ERUPTED, HE SAID, AND ONE OF THE TWO REMAINING CARS -- A WHITE FORD COMPACT VISIBLE IN VIDEO TAPES OF THE EVENT -- REMAINS AT LARGE.

AP-WX-1106 0913EST

**MEMORANDUM
OF CALL**

Previous editions usable

TO:

YOU WERE CALLED BY— YOU WERE VISITED BY—

b6
b7c

OF (Organization)

PLEASE PHONE FTS AUTOVON

WILL CALL AGAIN IS WAITING TO SEE YOU

RETURNED YOUR CALL WISHES AN APPOINTMENT

MESSAGE

Winston - Salem

RECEIVED

DATE

9/13

TIME

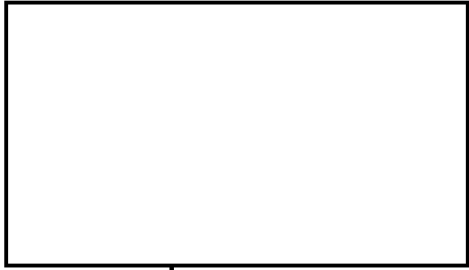
8:25

b6
b7c

GREENKIL
Winston - Salem

DOJ
FBI

Plaintiff's
Attorney



have to be present
if I talk to plaintiff's
attorneys

b6
b7C

MEMORANDUM
OF CALL

Previous editions usable

TO: [Redacted]

YOU WERE CALLED BY— YOU WERE VISITED BY—
[Redacted]

OF (Organization) *Legal - Winston Salem, NC.*

PLEASE PHONE ▶ FTS AUTOVON
FTS [Redacted]

WILL CALL AGAIN IS WAITING TO SEE YOU
 RETURNED YOUR CALL WISHES AN APPOINTMENT

MESSAGE
Civil Trial for Greenkil starts Monday. He hopes to know Monday when you will be needed. He was advised about Baltimore case.

RECEIVED BY [Redacted] DATE *4/8/85* TIME *2:20*

b6
b7C

b6
b7C

[Redacted]

USA, Winston, Salem, NC

b6
b7C

[Redacted] { [Redacted] office } Call when I get
Home } in Sunday

Go by office get:

1. GTRs
2. PI & EA Coupons
3. GREENKIL Notes
4. Qualification Sheets
5. Extra qualification questions or gunshot analysis
6. Note from [Redacted] or where to stay

b6
b7C

**MEMORANDUM
OF CALL**

TO:

[Redacted]

b6
b7c

YOU WERE CALLED BY YOU WERE VISITED BY

[Redacted]

OF (Organization)

- PLEASE CALL → PHONE NO. _____ CODE/EXT. _____ FTS
 WILL CALL AGAIN IS WAITING TO SEE YOU
 RETURNED YOUR CALL WISHES AN APPOINTMENT

MESSAGE

[Redacted]

9/6/83 8-10AM Night

b6
b7c

work

RECEIVED BY

J

DATE

8/Ke

TIME

RECEIVED
TELETYPE UNIT

17 AUG 82 20 50z

FEDERAL BUREAU
OF INVESTIGATION

TO DIRECTOR
FROM CHARLOTTE (100-1000) (P)

URGENT

FM CHARLOTTE (100-1000) (P)

TO DIRECTOR URGENT

BT

UNCLAS

ATTENTION FBI LABORATORY, ENGINEERING SECTION

GREENHILL

RE CHARLOTTE TELCALL TO FBIHQ, CIVIL RIGHTS SECTION, AUGUST
17, 1982.

SA [REDACTED], FBI LABORATORY, ENGINEERING SECTION, HAS BEEN
REQUESTED TO APPEAR AS A WITNESS BEFORE FBI IN WINSTON-SALEM, N. C.,
ON THE PREMISES OF [REDACTED].

SA [REDACTED] WILL TESTIFY TO [REDACTED]

[REDACTED]

SA [REDACTED] IS REQUESTED TO ARRIVE AT GREENSBORO-WINSTON-SALEM,
N. C., BY EVENING OF AUGUST 18, 1982. SA MAY CONFERENCE WITH
U. S. DEPARTMENT OF JUSTICE TRIAL ATTORNEY MICHAEL JOHNSON PRIOR
TO HIS DEPARTURE.

BT

①

Lab. Div.

Engineering Sect
1B046 JEM TS# 204

Crim. Inv. Div.

b3
b6
b7c

REPORT

of the
FBI

TECHNICAL SERVICES DIVISION
FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D. C. 20535

1 -	[Redacted]
	(Rm. 3050)
1 -	[Redacted]
1 -	
1 -	
3 -	
4 -	

Mr. William E. Swing
Chief of Police
Drawer W-2

To: Greensboro, North Carolina 27402 September 3, 1980

b6
b7c

Attention: [Redacted]
Staff Services Division

FBI FILE NO. 44-81521

LAB. NO. 91109083 E/S/D RD OC OY OZ

Re: GREENRIL

YOUR NO.	00107007 E RD
XXXXXXX	00109030 E RD
	00411060 E OZ

Your No. 79-0145368

Examination requested by: Addressee and FBI Special Agent in Charge, Charlotte
 Reference: Charlotte FBI letter dated November 6, 1979, and
 Greensboro Police Department letters dated March 31,
 1980, and June 11, 1980
 Examination requested: Video Tape - Signal Analysis - Firearms - Photographic
 Specimens received: Specimens were previously described in Technical
 Services Report dated August 21, 1980

Result of examination:

An aural, visual, and electronic examination including high speed time-continuous waveform analysis and digital measurements was conducted of specimens Q1, Q406, Q407, Q408, and Q409, copies of Q1, Q406, and Q407, and various test recordings prepared by the Technical Services Division. The following information supplements the Technical Services Report dated August 21, 1980.

The locations of the muzzle blasts of gunshots 3, 4, and 5 all probably occur north of the intersection of Carver Court and Everitt Street, Greensboro, North Carolina, though no exact locations could be determined.

2 - [Redacted]

b6
b7c

2 - FBI, Charlotte (44-3527)

BEK/kmn*
(18)

This examination has been made with the understanding that the evidence is connected with an official investigation of a criminal matter and that this report will be used for official purposes only, related to the investigation or a subsequent criminal prosecution. Authorization cannot be granted for the use of this report in connection with a civil proceeding.

FEDERAL BUREAU OF INVESTIGATION
TECHNICAL SERVICES DIVISION

10/7, 1980

	RM#	TL#		RM#	TL#		RM#	TL#
Mr. Bayse	7159	213	Admin. Unit	1997	153	Teletype	6247	244
Mr. Boyd	7159	213	Contract Review Unit	1839	253	White Collar	5155	233
NCIC	7230	245	Evid. Control Center	3434	241	Civil Rights	3050	231
OIS-R&D	6875	212	Reading Room	4437	242	Criminal Inves. Div.	5012	233
OMS	6421	244	Mail Room	1B327	152	Intelligence Div.	4026	232
PP&M	6823	212	Pr. & Sp. Mgnt.	1B875	151	Payroll	1907	153
SDS	1334	153	Routing	4336	111	Voucher	1262	153

General Technical Support

Room 3662, TL# 155

OPERATIONAL SUPPORT

[Redacted]

RADIO ENGINEERING

[Redacted]

Rm 3662, TL# 155

Rm 3662, TL# 155

Rm 3662, TL# 155

Rm 3662, TL# 155

b6
b7c

SIGNAL ANALYSIS

[Redacted]

RESEARCH & DEVELOPMENT

[Redacted]

ELECTRONIC ANALYSIS

[Redacted]

Rm 3662, TL# 155

Rm 3662, TL# 155

Rm 3662, TL# 155

Rm 3662, TL# 155

[Redacted]

Rm 3662, TL# 155

For Your Info.
Please Call Me
Please Handle
Please Initial
Please Copy ea.
Note & Return
See Other Side

Pls make two (2) xerox copies of everything

T. Jones

b6
b7c

DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION
INTERNAL ROUTING/ACTION SLIP

TO	BLDG.	ROOM	TL#	NAME/TITLE/ORGANIZATION	TO	BLDG.	ROOM	TL#	NAME/TITLE/ORGANIZATION
	JEH	5012	(233)	[Redacted]		JEH	5012	(233)	[Redacted]
	JEH	5012	(233)	[Redacted]		JEH	5012	(233)	[Redacted]
	JEH	3012	(231)	[Redacted]		JEH	3823	(231)	[Redacted]
	JEH	5030	(233)	[Redacted]		JEH	3823	(231)	[Redacted]
	JEH	5155	(233)	[Redacted]		JEH	3823	(231)	[Redacted]
	JEH	4042	(242)	[Redacted]					
	JEH	3823	(231)	[Redacted]		JEH	3028	(231)	[Redacted]
	JEH	3076	(231)	[Redacted]		JEH	3125	(231)	[Redacted]
						JEH	3853	(231)	[Redacted]
	JEH	3823	(231)	[Redacted]		JEH	3853	(231)	[Redacted]
	JEH	3841	(231)	[Redacted]		JEH	3125	(231)	[Redacted]
	JEH	3050	(231)	[Redacted]		JEH	3845	(231)	[Redacted]
	JEH	3117	(231)	[Redacted]					
						JEH	5027	(233)	EXTRA-DUTY DESK
	JEH	3137	(231)	[Redacted]		JEH	6247	(244)	TELETYPE ROOM
	JEH	3133	(231)	[Redacted]		JEH	1B327	(152)	MAIL ROOM
	JEH	3133	(231)	[Redacted]		JEH	1901	(153)	VOUCHER & PAYROLL SECTION
	JEH	3839	(231)	[Redacted]		JEH	6437	(244)	INFORMATION DESK
	JEH	3835	(231)	[Redacted]		JEH	4645	(225)	SERVICE UNIT
	JEH	3002	(231)	[Redacted]		JEH	4336C	(111)	RECORDS BRANCH
	JEH	3137	(231)	[Redacted]					OPEN FILE,
	JEH	3050	(231)	[Redacted]					SEARCH, REVIEW, & RETURN
	JEH	3841	(231)	[Redacted]					WITH BUFILE
	JEH	3002	(231)	[Redacted]					NOTE & RETURN
	JEH	3835	(231)	[Redacted]					ADVISE ALL AGENTS
	JEH	3050	(231)	[Redacted]					ADVISE ALL PERSONNEL

b6
b7C

b6
b7C

Room 1B036B (JL 253)

b6 -
b7C

Pass on to [Redacted] - people down
W Greenbow said [Redacted] was impressive
and put on a good show

- RECOMMENDATION/COMMENT
- SEE REMARKS ON REVERSE
- MAKE COPIES (NO. *3*)
- RETURN (BY *Shanks*)
- LOG
- FILE
- SEE ME
- CALL ME
- NECESSARY ACTION
- COORDINATE
- PER INQUIRY
- INFORMATION

b6
b7C

FROM	BLDG.	ROOM
RM. 3002, RT. 3346	PHONE	DATE

(Indicate page, name of newspaper, city and state.)

K D-1

Greensboro Daily News
Greensboro, NC

Date: 9-26-80

Edition: morning

Title:

Character: Greenkil
or

Classification:

Submitting Office: Charlotte (GRA)

(Mount Clipping in Space Below)

Witness Says Klan Warned Against Guns

BY STEVE BERRY
Daily News Staff Writer

Ku Klux Klan member Renae Hartsoe testified Thursday that Klan leaders urged members at three meetings not to take weapons with them to confront Communist Workers Party members at a "Death to the Klan" march last Nov. 3.

Nevertheless, Hartsoe, 18, of Hickory said Klansmen were armed when they left for Greensboro for the CWP-sponsored rally that erupted into violence and left five CWP members dead.

Hartsoe said several weapons were with her in the car of Klansman David Matthews. Matthews is one of six defendants currently on trial on murder and rioting charges.

And, she testified, her husband Terry, 20, who will stand trial later on the same charges, brought his shotgun.

Hartsoe was called to the stand by defense lawyers. The daughter of a Klan leader, Hartsoe described Klansmen's planning for the meeting with Communists, what she saw that day and a cross-state flight that ended when she abandoned her car in Charlotte.

Hartsoe was one of three women riding in the nine-vehicle caravan that carried 40 to 50 Klansmen and Nazis to the corner of Everitt Street and Carver Drive in southeast Greensboro.

She testified her husband and Matthews, 25, of Newton, rode with 12 others in a van at the end of the caravan.

Terry Hartsoe and Matthews are among 11 Klansmen and Nazis charged with five counts of murder and one count of rioting. On trial now are Matthews and fellow Klansmen Coleman Pridmore, 37, and Lawrence Morgan, 23, both of Lincolnton; Jerry Smith, 33, of Maiden; and Nazi defendants Roland Wood, 35, and Jack Fowler Jr., 25, both of Winston-Salem.

Renaë Hartsoe, whose mother heads a Klan unit in Icard, about 18 miles west of Hickory, was the second defense witness to testify.

She said Virgil Griffin of Stanley, North Carolina Grand Dragon of the

Invisible Empire of the Knights of the Ku Klux Klan, urged her, Terry, and seven others at a meeting in Icard two weeks before the CWP march not to engage in violence and not to take weapons.

She said everyone voted in favor of Griffin's suggestion. During cross-examination by Assistant District Attorney Jim Coman, she denied the vote was to let each member decide whether to take a gun.

She said the no-violence theme was repeated at a Klan rally at the Lincolnton fairgrounds. She said Griffin and Klansmen Eddie Dawson, later identified as a police informant, urged no violence or guns at the march.

Similar urgings were made before the march at a home on U.S. 220 south of Greensboro where the Klan and Nazis met to form the caravan to go to the march. She said, however, there was a warning that "there could be trouble."

She said she rode to the march in a car with several others including Klansmen Lee McLain, 36, of Lincolnton, and Lisford Nappier Sr., 60, of Fletcher. Both are charged with rioting in connection with the Nov. 3 shooting.

When the caravan arrived at the rally site in the Morningside Homes neighborhood, she said CWP demonstrators started hitting her car. Hartsoe said she "scrooched" down because she was afraid. At about that time, Nappier, McLain and Chris Benson, driver of the car, jumped out of the car and ran toward the demonstrators, she said. Then a shot rang out from the direction of the demonstrators, she said.

She said she "screamed and hollered" and got down on the floorboard. Hartsoe said she "peaked up" one time and saw some demonstrators carrying shotguns or rifles "running back to where the commotion was." Simultaneously, Benson came back to the car and drove away leaving Nappier and McLain behind.

The two men later were found by police in a van driven by Morgan.

Later, Hartsoe drove to the mountain town of Boone looking for her husband, because, she said, she still didn't know what had happened to him.

Griffin, Benson, and Mark Sherer, 19, of Cramerton, who later was charged with rioting, were with her, she said.

The next morning the group rode to Whiteville, in eastern North Carolina, because the three men feared police were looking for them, Hartsoe conceded during cross-examination.

In Whiteville, Renaë Hartsoe said they told her to drive to Charlotte and "ditch the car." She said her mother drove to Charlotte to take her home.

Indicate page, name of newspaper, city and state.)

B-1
Greensboro Record
Greensboro, NCDate: 9-24-80
Edition: evening

(Mount Clipping in Space Below)

Title:

Character: Greenkil
or
Classification:
Submitting Office: Charlotte (GRA)

Defense: Many shots communists'

BY RICK STEWART
Record Staff Writer

Defense lawyers began presenting their case this morning in the murder trial of six Ku Klux Klansmen and Nazis by telling jurors that nearly half of the 39 shots fired on the morning of Nov. 8 came from members of the Communist Workers Party.

Lawyer Percy Wall, who represents David Wayne Matthews, told jurors in his opening statement this morning that the defendants were merely defending themselves against an attack by "sticks, clubs and guns" carried by members of the CWP. Five CWP members were killed in the clash.

The first witness called by the defense today was Bruce Koenig, an audio expert with the FBI in Washington. Koenig testified that through examination of the sound tracks on the videotapes taken by television newsmen on Nov. 8, he was able to determine where each shot originated.

The first shot fired, said Koenig, came from about 190 feet west of where most of the shooting from the KKK-Nazi caravan was located.

The second shot came about 12 seconds later from the same vicinity, said Koenig. He said he could not say with 100 percent certainty where shots

three, four and five came from but speculated they came from the area between the Morningside Homes recreation center and an apartment complex — an area where the CWP members were staging their "death to the Klan" rally.

Koenig used a map to show jurors where shots originated. He testified he also was able to tell how many seconds separated each shot. The 39 shots, he said, were fired during a period of 88 seconds.

Several of the shots came from an area within the Morningside Homes complex. Wall told jurors the person who fired those shots "was a white female wearing a yellow coat." Also, Koenig testified that several shots were fired near the east side of the recreation building.

Wall told jurors evidence would show that on Nov. 8 "members of the Klan were attacked by the Communists and on that occasion the defendants were responding to the violence through their lawful right of self-defense."

He added, "The evidence will show that of the 39 shots fired, 17 and perhaps 19 or more were fired by the Communists."

Prior to Wall's opening comments, lawyer Robert Douglas III, who represents Lawrence Gene

Morgan, told jurors none of the defendants planned any violence when they came to Greensboro.

Both Wall and Douglas said Eddie Dawson, a Klansman who was a police informant, was the only one who knew the rally was not going to take place in a shopping center.

Tuesday afternoon presiding Judge James M. Long denied a defense motion that charges be dismissed or reduced against the six defendants, who each face five counts of first-degree murder and engaging in a riot.

Long also ruled that the jurors would not visit the scene of the clash between KKK-Nazis and CWP members. He said, in response to District Attorney Mike Schlosser's request to take the jurors to the scene, that he did not think it would be helpful at this point. He added, however, that either side could renew the motion to take jurors to the area later in the trial.

Defense lawyers also were denied a motion to strike the four days of testimony by FBI chemist Donald Havekost. Defense Lawyer Hal Greeson argued that his testimony would confuse the jurors.

In this testimony today, Koenig said he began working on the magnetic tape analysis from the tele-

vision tapes in November and just completed his work Sept. 3.

Defense lawyers estimated their case may take up to two weeks.

Meanwhile, defense attorneys say they anticipate calling federal undercover agent Bernard Butkovich to testify but are not sure when he will be asked to take the stand.

"We're not 100 percent sure, but we anticipate calling him," Robert Douglas III said today. "It's a matter of the timing."

Butkovich, an undercover agent with the U.S. Bureau of Alcohol, Tobacco and Firearms, met with three defense attorneys Monday afternoon to answer questions about his infiltration of the Forsyth County Unit of the Nazi party a year ago.

While operating under cover, Butkovich attended a Nov. 1 planning session for the Nazi-Klan caravan. Defense attorneys have said they expect the agent's testimony would show caravan organizers did not discuss shooting Communist Workers Party members during that meeting.



Percy Wall

Indicate page, name of newspaper, city and state.)

B-1

Greensboro Daily News

Greensboro, NC

Date: 9-23-80

Edition: morning

(Mount Clipping in Space Below)

Title:

Character: Greenkil
or

Classification:

Submitting Office: Charlotte (GRA)

Defense Has Secret Meeting With Agent

Daily News Staff Report

Defense lawyers in the Klan-Nazi trial met Monday with federal agent Bernard Butkovich to question him about his role as an infiltrator in the Nazi Party and the planning of the Nov. 3 confrontation with Communist Workers Party demonstrators.

Robert Douglas III said he and two other defense attorneys, Robert Cahoon and Jeffrey Farran, had "a very productive meeting" that lasted about an hour. He said Butkovich answered all their questions. Douglas said, however, he didn't know if Butkovich will be called to testify until after the rest of the defense team had been consulted.

Douglas did not say where the meeting took place.

Butkovich, an agent of the U.S. Alcohol, Tobacco, and Firearms Division of the Treasury Department, attended a meeting Nov. 1 in Winston-Salem in which the Nazis and the Klan discussed a trip to the CWP's "Death to the Klan" march in Greensboro.

That trip ended with gunfire and the deaths of five CWP members. Six Nazis and Ku Klux Klansmen are charged with murder. The defense team is expected to start presenting its case this week.

The meeting Monday, arranged by Assistant District Attorney Jim Coman, was shrouded in secrecy.

Coman declined to reveal any details of the meeting. Shortly after being questioned about it by a reporter, Coman could be heard upbraiding Farran and Douglas because reporters had learned of the meeting.

Farran said Coman was coordinating the meeting. He said an ATF attorney would be present during the session.

One purpose of the meeting was to determine if Butkovich will be called by the defense team to testify.

Defense lawyers said last week they probably won't call him to testify unless Butkovich agrees to discuss his testimony beforehand.

Although Butkovich attended the Nazis' planning meeting, defense lawyers have argued all he heard was a discussion of plans for a non-violent counterdemonstration against the CWP. They claim his testimony about what he heard would bolster their self-defense claims.

Butkovich infiltrated the Nazis to investigate reports some members had illegal weapons.

In the meantime Monday, state prosecutors delayed resting the prosecution case against the Klansmen and Nazis in order to make sure they have firmly established the chain of custody of the nearly 600 items of evidence.

Assistant District Attorney Rick Greeson called six witnesses, all of them law officers, to explain how they obtained custody of the evidence before transferring the custody to someone else.

Greeson is expected to finish that procedure this morning. A hearing on a prosecution motion to take the jury on a tour of the shooting scene at the corner of Everitt Street and Carver Drive in southeast Greensboro also is expected today.

During the lunch recess Monday, CWP leader Nelson Johnson said he won't be satisfied with the results of the trial even if all of the defendants are convicted.

He said he will be satisfied only if President Carter, Gov. Jim Hunt and others were convicted of plotting the deaths of the CWP members Nov. 8 and then trying to cover up their roles.

The CWP accuses Carter, Hunt and state and federal law enforcement agencies are responsible for the deaths and are now trying to cover their involvement.

He claimed the government is harassing the CWP with "trumped-up" charges.

Says Communist Shot Him

Klansman Identifies Assailant

By Michael P. Massoglia
Staff Reporter

GREENSBORO — A Ku Klux Klansman who was wounded at the anti-Klan rally here last Nov. 3 testified yesterday that he was shot by a Communist demonstrator in a yellow coat with a shotgun. But an FBI expert had testified earlier that the only demonstrator near him in a yellow coat was a woman firing a pistol.

"It looked like a shotgun to me," said Harold Dean Flowers in cross-examination. Flowers was wounded by shotgun pellets.

While testifying for the defense, Flowers said that he saw one Communist with a nickle-plated pistol. "I seen him shoot several times and he turned and pointed the gun at me," he said. "I'm sure he would have shot me if he had any more ammunition."

Flowers turned and ran, he said, but before he reached safety, another demonstrator with a shotgun wounded him.

That testimony in Guilford Superior Court came during the trial of six Ku Klux Klansmen and Nazis charged with murdering five demonstrators and

feloniously rioting at the rally. Flowers faces trial later on the same charges.

It was under cross-examination that Flowers said that he was shot by a demonstrator wearing a yellow coat. When a prosecutor asked him why he never mentioned that demonstrator when questioned by police after his arrest Nov. 3, Flowers replied, "I guess I was scared and forgot."

On a videotape of the rally, a woman in a yellow raincoat can be seen in the area where Flowers said that his assailant was standing. An FBI expert testified earlier this week that the

woman in yellow had been firing a pistol at the rally.

Flowers and Listford Carl Nappier Sr., a Klansman who also faces a charge of felonious rioting at the rally, both testified that they left their vehicles in a caravan at the scene when Communists attacked a car carrying three women.

"We got out to aid the females in the car they were beating on (with sticks)," Flowers said.

During planning meetings for the caravan, Nappier said, he urged

See Klansman, Page 20

(Mount Clipping in Space Below)

Indicate page, name of newspaper, city and state.

Page 13

Winston-Salem Journal

Date: Winston-Salem, NC

Edition: 9-27-80

Title:

Character: Greenkill

or

Classification:

Submitting Office: Charlotte (GRA)

Klansman Testifies Communist Shot Him

Continued From Page 13

Klansmen to go to the rally unarmed.

"I think taking guns, besides being wrong, basically shows a lot of fear," Nappier said. "I just encouraged them not to bring weapons. If we had to fight and were attacked . . . we'd just go down swinging."

Nappier said Klansmen thought there would be about 700 anti-Klan demonstrators at the rally, and added that he was surprised to see only about 75. "I was led to believe that we'd have to go up against a big mob," he said.

Defense attorneys have argued that their clients acted in self-defense at the rally after the caravan was attacked by

demonstrators with sticks and guns.

Late yesterday they tried to introduce testimony from a gun shop owner in Hillsboro who sold weapons to members of the Communist Workers Party between July and October 1979.

Prosecutors strongly objected to the testimony, and with jurors out of the courtroom, they argued that such evidence would inflame the jury. But defense attorneys argued that it would show that the demonstrators had the means to be well-armed at the rally.

"These guns purchased in preparation for an attack on the Klan are more relevant to this case than anything else," argued Harold Greeson, a

defense attorney. "It's up to the jury to determine whether the Communists came loaded for bear."

Judge James M. Long, however, disagreed, and ruled in favor of the state. "My feeling is there should be at least some connection shown," he said.

Also yesterday, an anti-Klan demonstrator who was jailed for contempt of court for refusing to testify last month was released from jail after serving a 30-day sentence.

And Nelson Johnson, a leader of the Communist Workers Party, was acquitted in District Court on a charge of assaulting an officer during a bond hearing Aug. 6.

(Indicate page, name of newspaper, city and state.)

B-1

Greensboro Record
Greensboro, NC

Date: 9-25-80

Edition: evening

(Mount Clipping in Space Below)

Title:

Character: Greenkil
or

Classification:

Submitting Office: Charlotte (GRA)

Shots-sound testimony may not have precedent

BY RICK STEWART
Record Staff Writer

An FBI audio expert continued his testimony this morning in the murder trial of six Ku Klux Klansmen and Nazis and may be creating "new law" in North Carolina with his testimony.

Special Agent Bruce Koenig is testifying that through analysis of videotapes made by television newsmen on the morning of Nov. 3 he can reconstruct where each of the 39 shots fired that morning originated.

Wake Forest University Law Professor James Sizemore said in an interview that Koenig's testimony may be unique in the state. He explained that new law means that such testimony and illustrations are the first that have been entered as substantive evidence in a trial.

Defense lawyer Percy Wall, who called Koenig as the defense's first witness, said he thinks this is the first such testimony used in the state. He added that during his research for the trial he could find no other evidence of this kind.

Superior Court Judge James M. Long allowed Koenig's testimony when defense and prosecution lawyers agreed to let it be entered uncontested. Sizemore said it is unlikely an appellate court would rule the evidence inadmissible if both sides agreed to allow it into evidence.

His testimony showed that the first shot was likely fired from one of the Klan caravan vehicles as it made its way past the staging area for a Communist Worker's Party "death to the Klan" rally.

In his testimony, Koenig is often pointing out on the slow motion videotape who likely fired the shots heard on the tapes.

In some cases, he said it is impossible to determine. But on others he said he can definitely determine who fired the shots. Defense lawyer Wall said Wednesday in his opening statement to jurors that the defense would show that perhaps 17, 19 or more of the 39 shots were fired by the CWP.

Koenig testified that he cannot tell exactly where shots 3, 4, and 5 originated. He said the sound waves are not sufficient for him to pinpoint the origins.

The trial also created new law when Long allowed the videotapes to be introduced as substantive evidence. Sizemore said he has heard of several trials where the judge allowed a photograph to be entered as substantive evidence but said he is not aware, prior to this trial, that a videotape has been allowed into evidence. He explained that by allowing something in as substantive evidence the jury may consider everything they see. Other judges have allowed pictures and videotapes in as illustrative evidence but always instruct jurors they must consider only what they see that illustrates the testimony of a witness.

Koenig admitted during recess this morning it is unusual to have videotapes available to help analyze multiple gun shots. He said this is the first time he is aware that such evidence has been used in a trial.

In his testimony this morning, Koenig explained that determining where each shot originated by listening to portions of the videotapes is "slow, tedious" and requires "exacting physics."

He explained that for each second of sound on the audio, he made 200 inches of sound waves. He said he then matched the sound waves, including echo sound waves, with where they could have originated at the scene. "That's why it took us from November to the first of this month to do it," he explained to jurors. "We had to plot every sound and every echo." During the first hour of his testimony this morning, Koenig showed by using videotapes and a map where each shot originated. He was doing the same thing Wednesday afternoon, but court was recessed to give the videotape player time to cool.

Indicate page, name of newspaper, city and state.

B-1

Greensboro Daily News
Greensboro, NC

Date: 9-22-80

Edition: morning

(Mount Clipping in Space Below)

Title:

Character: Greenkil
or

Classification:

Submitting Office: Charlotte (GRA)

Greeson For The Defense: Trial's Surprise Performer

BY STEVE BERRY
Daily News Staff Writer

When a Durham television cameraman took the witness chair late one afternoon in the Klan-Nazi murder trial, Greensboro lawyer Hal Greeson knew what was going to happen.

Edward Boyd of WTVD-TV was about to tell the jury that Greeson's client, Ku Klux Klansman Coleman Pridmore, and three other defendants shot at Communist Workers Party members during a Nov. 8 anti-Klan rally at which five demonstrators were killed.

That testimony would contradict Pridmore's assertion that he never fired his gun that day. Greeson was worried. The

89-year-old, silver-haired lawyer watched Boyd coolly weather the cross-examination by Greeson's five colleagues.

But Greeson, up late the night before in preparation, was ready with a well-planned line of questioning.

He took Boyd back through several police interviews before the trial. "You didn't identify anyone in that interview, did you?" Greeson asked in a loud accusatory voice about four times in rapid succession.

Each time Boyd said no one asked him to identify anybody.

Finally Greeson got to the clincher — Boyd's interview with the defense team's investigator, Fran Mintz, on April 1.

Greeson reminded Boyd that the session

was tape-recorded, that Mintz asked Boyd whom he could identify and that Boyd said he could identify only one defendant, Jerry Smith, 33, of Maiden.

For the first time, Boyd appeared less sure of himself.

"I can't remember," he responded to another question. "It was a short interview, and I can't recall her asking me that."

Cross-examinations like that one, plus his colorful style, have made Harold Greeson the surprise performer in a trial most observers expected to be dominated by the flamboyant and skillful Robert Cannon, who sits opposite Greeson at the L-shaped defense table.

(See Lawyer: B-2, Col. 2)

Klan-Nazi Trial

Lawyer Hal Greeson Is Surprise Performer

From B-1

Indeed, Cahoon, 64, a veteran criminal trial lawyer, has lived up to his reputation as a jury charmer, an aggressive cross-examiner, and a copious notetaker.

But Greeson, who is in his first murder trial, has brought smiles to the jurors more than once and has proved an aggressive interrogator, also.

It was Greeson's cross-examination — after his colleagues had their turns — which revealed to the jury that two key witnesses had been hypnotized by state Sen. Joe Raynor of Fayetteville at the request of prosecutors. The discovery gave the defense another chance to try to ease the impact of some potentially damaging testimony.

"I didn't expect him to give me that answer," Greeson said, recalling the way Nelson Williamson, who lives near the shooting scene at Everitt Street and Carver Drive, almost casually mentioned his trip to Fayetteville.

Greeson, who was a wrestler in high school and college, confidently lumbers around the courtroom with surprising agility for a man weighing 220 pounds, which he admits is about 35 pounds too much.

He is a witty, unpretentious man, an urbane good ol' boy with a distinct Southern accent and a knack for expressing complex questions in a way common folks can understand.

He pronounces the "Ku" of Ku Klux Klan like the letter 'q.' Greeson has spoken that letter many times in the trial because the Federal Bureau of Investigation uses it as the first letter of numbers it assigns to the evidence analyzed in the Washington laboratory.

Said one observer of Greeson's pronunciation: "He's the first person I've ever met who pronounces 'q' with two syllables."

Greeson has been in private practice since graduating from Wake Forest University Law School in 1966. He handles more civil than criminal cases.

His father, A.V. Greeson Jr., 66, who sells broadcast equipment to television and radio stations, has been watching his son work every day since the testimony started seven weeks ago.

"I just want to see if I wasted my money sending him to law school," he said jokingly during a recess recently.

The trial is only the third time the elder Greeson, an amateur hypnotist, has watched his son work. The first one was the lawyer's first trial, which the elder Greeson calls the "mule case."

A mule broke the lock on his pen and had a collision with a pickup truck. No one was hurt, but the mule was killed. The truck was damaged heavily and the insurance company sued the owner of the mule to recover the damages.

Greeson represented the mule owner, demanded a jury trial in civil court and won the case arguing a mule can get out of any pen constructed by man when the mule wants to. He earned \$150 on that case.

Civil cases have been Greeson's forte throughout his legal career. In criminal court, a manslaughter case was his most serious jury trial until the Klan-Nazi case.

But Greeson seemed unbothered by his lack of experience in murder cases when asked about it several days before the trial started.

Civil trial or murder trial, the same talents are required, he said without a hint of defensiveness.

"The only difference is that there is a little more pressure on you in a murder trial because someone's life is at stake," he said.



Staff Photo By John Page

Greeson Goes Through Evidence Books Of Klan-Nazi Trial

D-1

Greensboro Record

Date: Greensboro, NC

Edition: 9-26-80

evening

(Mount Clipping in Space Below)

Title:

Character:

or

Greenkil

Classification:

Submitting Office:

Charlotte (GRA)

Witness: Klan expected 700 leftists at rally

BY RICK STEWART
Record Staff Writer

The defense's third witness in the Klan-Nazi murder trial testified today that the Klansmen and Nazis expected to find about 700 communists when their caravan arrived at the "Death to the Klan" rally Nov. 3.

Carl Nappier Sr., a resident of Hickory and a member of the Klan who has been charged with engaging in a riot on the morning five Communist Workers' Party members were killed, said, "I was surprised (when the group arrived at the corner of Carver Drive and Everitt Street and found about 75 people present.)

Nappier, 61, provided several humorous moments in the courtroom this morning. On cross examination by Assistant District Attorney Jim Coman, Nappier was asked about the weapons carried in the car in which he was riding. He testified there was a gun in the trunk and a "numchuck" in the front seat.

He explained that a "numchuck" is two pieces of wood, each about 10 to 14 inches long, connected with a chain with swivels. When Coman asked about the weapon, Nappier, matter-of-factly, said, "If a person is not experienced at using them he usually knocks his brains out." The courtroom exploded with laughter.

Later, the jurors chuckled when Nappier responded to a question about carrying a gun to the rally. "I'd consider it fear to wear a gun — wouldn't you?" he asked Coman. And, many jurors smiled when Nappier said the members of the caravan weren't expecting any help when they arrived at the "Death to the Klan" rally. "I've never known anyone to help us out," he said.

Nappier said he was led to believe by Eddie Dawson that 700 people would be at the rally. Dawson was later identified as a police informant. Nappier said about 30 people left a house near the intersection of US 220 headed to the communist rally.

At Klan meetings prior to the Nov. 8 incident, Nappier said he urged fellow Klansmen not to carry guns to Greensboro. Nappier said he was secretary of the state Klan.

He testified he left the house near 220 and rode in a car to what he thought would be a shopping center. When the caravan turned onto Carver Drive, he said, the communist began attacking the cars. He said the car in

which he was riding was struck three times by people carrying sticks and baseball bats.

Three women were in the car with him, he said. When the CWP members started beating on the cars, he said, the women began screaming. The men then jumped out of the car.

Nappier said he walked up the sidewalk and headed toward an area where a stick fight had erupted between Klansmen and CWP supporters. Before he got there, he said, a large "tall black guy with a stick" stepped in front of him. Nappier said he drew back his fist and the black

(Continued on Page D2, Col. 1)

Klansman:

700 expected

From Page D1

man drew back the stick. "It was a Mexican standoff," he said, as both stood there looking at each other.

About that time, he said, he heard a shot fired. "He (the black man) ran toward where the shots came from."

Nappier said he continued to walk toward the scene of the stick fight.

When he got several feet from the site, he said, he saw a man standing near the recreation center pointing a pistol at him. He said he turned and went back toward the car. A few seconds later, he said, a van in the caravan came by and picked him up.

Nappier testified, as did Renea Hartsoe, the defense's second witness, that the Klansmen wanted to heckle and "shout down" the communists.

Hartsoe testified Thursday afternoon.

On cross examination Nappier testified that he saw about five guns at the house near 220. One of them, he said, was an automatic weapon. He said someone told him he could buy a gun like it for \$287.

Judge James Long recessed early this morning so that defendant David Matthews could visit a physician at the Guilford County jail. Defense lawyers said Matthews was suffering from back pains. After the recess Matthews returned to his seat behind the defense lawyers.

The defense team's first witness, FBI audio expert Bruce Koenig, completed his testimony Thursday afternoon.

Koenig testified that a woman in a yellow rain slicker could be seen firing several shots in the direction of the Klan-Nazi caravan. CWP supporter Dorothy Blitz, who has been charged with rioting, was wearing a yellow raincoat Nov. 8 and appears on one videotape saying, "We only tried to defend ourselves."

Indicate page, name of newspaper, city and state.)

B-1
Greensboro Daily News
Greensboro, NC
Date: 9-27-80
Edition: Morning

(Mount Clipping in Space Below)

Title: Greenkil

Character:

or

Classification:

Submitting Office: Charlotte (GRA)

KKK Wanted To Aid Women

BY STEVE BERRY
Daily News Staff Writer

A Ku Klux Klansman said he and others jumped from their vehicles and fought with communist demonstrators Nov. 3 to protect Klan women riding in their caravan at the "Death to the Klan" march.

"They were trying to get the women out of the car," said Harold Flowers, 33, a Lincolnton Klansman who was riding in a yellow van four cars behind the car carrying three women who had come with them to Greensboro to confront the Communist Workers Party.

Flowers said he and several others from the caravan were running to their rescue when they were stopped about halfway by stick-wielding communists. The ensuing fight led to a hail of gunfire. When it ended only a minute later, five Communists were dead, and the car carrying the women had driven safely away.

Flowers, a short, thin man, was called as a defense witness after state Klan official Lisford Nappier, 62, testified Klansman had expected to be met by about 700 CWP demonstrators when they arrived in Greensboro.

Nappier conceded during cross-examination that Klansmen came to the city fulling expecting a fight.

Though Flowers' testimony about the communist attack on the women's car was viewed as a strong emotional boost to the defendant's self-defense claims, it conflicted at several crucial points with testimony from other witnesses, including scientific evidence from another defense witness.

Flowers, who was wounded in the Nov. 3 conflict, is facing five counts of murder and one of felonious rioting. He will be tried later.

The criminal counts against him are the same charges facing the six defendants for whom he testified Friday. They are fellow Lincolnton Klansmen Coleman Pridmore, 37, and Lawrence Morgan, 28; Roland Wood, 35, and Jack Fowler, 28, both of Winston-Salem; Jerry Smith, 33, of Maiden; and David Matthews, 25, of Newton.

Flowers testified all of those men except Fowler were in the van with him. Fowler was driving a light blue Ford directly in front of the van.

When the two vehicles turned on to Everitt Street and approached the CWP demonstrators, the van was halted by a traffic jam, Flowers said in a barely audible, raspy voice.

He said Morgan couldn't escape by backing out because a car behind the van blocked his way. But

yers have argued the defendants had to fight because there was no escape route.

As they sat in the stalled van watching the demonstrators, Flowers said he saw them start beating on the car carrying several women, including Renae Hartsoe, who testified Thursday.

Klansman Tony Hartsoe, 19, of Hickory, who also is facing murder and rioting charges, yelled, "My wife's in that car," Flowers said.

With that exclamation, the Klansmen jumped out of the van, ran toward the car and were met by the CWP demonstrators, Flowers recalled. He was hit on the head with a 2-inch-thick stick almost immediately, but not hurt seriously, he said. About that same time, he heard what he called the first shot and said it came from where the CWP members were located.

But the spot he identified is a long way from the point where scientific testimony offered by the defense Wednesday had placed the first shot. That testimony came from Bruce Koenig, an audio expert with the Federal Bureau of Investigation. He said the second shot came from even farther away and that he was unable to pinpoint the next three shots.

Nevertheless, after the disputed first shot, Flowers said another communist fired several pistol shots toward the van from a spot where another defense witness, Lisford Nappier of Hickory, said he heard three shotgun blasts.

As he ran back to the van, Flowers said he was shot in the leg and shoulder by a man wearing a yellow jacket firing a shotgun. Koenig, however, identified that person as a woman and said she was firing a pistol.

Assistant District Attorney Jim Coman pointed out several apparent conflicts with statements Flowers gave police on Nov. 3. Flowers explained the differences, saying he was still scared, confused and hurting from the gunshot wound when he gave that statement to police.

Although there were several contradictions in Flowers' testimony, Nappier's testimony earlier Friday gave an indication of why Flowers may have thought the communists were trying to get Hartsoe's wife and other women out of the car.

Nappier, who was riding in the car with Mrs. Hartsoe and two other women, said the communists were "grabbing at the door handles, beating on the cars, and cursing."

Nappier, a 62-year-old gray-bearded state Klan secretary from Hickory, said he came to Greensboro fully expecting a fight to break out.

Fight Cause Said To Protect Women

From B-1

Testifying in an easy-going and colorful style that frequently brought laughter to the courtroom, Nappier said Klansman Eddie Dawson, later identified as a police informant, told him in October their small group would have to face about 700 people at the "Death to the Klan" march.

Nevertheless, the plans of the Klan and Nazis were to avoid violence, he said. Their purpose was to heckle the communists, throw eggs at them, shout down their speeches, and generally disrupt the march, Nappier explained.

Nappier was arrested with Flowers and five of the six defendants after the confrontation. As they were being taken to the police station, Nappier said he heard Matthews say "he got three of them." He is the second witness to attribute that statement to him.

Matthews made the same comment to a Guilford County jailer early the next morning, Deputy Sheriff Coy Garrett testified last month.

The charges against Nappier originally were five counts of murder and one count of conspiracy to commit murder. Those charges later were reduced to a single count of felonious rioting, which is pending.

(Indicate page, name of newspaper, city and state.)

A-1

Greensboro Daily News
Date: Greensboro, NC
Edition: 9-30-80
morning

(Mount Clipping in Space Below)

Title:

Character:

or

Classification:

Submitting Office: Charlotte (GRA)

Shot Over Heads

Wood: 'I Didn't Want To Kill'

BY STEVE BERRY
Daily News Staff Writer

Roland Wood, accused of murdering five Communist Workers Party members Nov. 8, testified Monday he fired his shotgun at CWP demonstrators only after he saw they were armed and running toward him.

But when he fired at the demonstrators, he said he shot over their heads. "I didn't want to kill anybody; I just didn't want them to kill me," the 35-year-old Winston-Salem Nazi said during a long grueling cross-examination by Assistant District Attorney Rick Greeson.

Wood said he, other Nazis and Klansmen had planned a non-violent confrontation with the CWP. "I had practiced singing 'My Country 'Tis of Thee' and that is what I was going to sing out there," he said.

Wood, replacing his usual sport shirt for a plaid coat, burgundy tie, and blue shirt, was the first of the six Klan and Nazi defendants to testify about the confrontation with the CWP shortly before the "Death to

the Klan" march in front of Morningside Homes.

The others are Jack Fowler Jr., 28, of Winston-Salem; Lawrence Morgan, 28, and Coleman Pridmore, 37, both of Lincolnton; Jerry Smith, 33, of Maiden; and David Matthews, 25, of Newton.

During his time in the witness chair in a Guilford County courtroom, Wood testified about meetings he led for Forsyth County Nazis before the shooting. He said he suspected one of his members was a federal undercover agent.

His suspicions later proved true. Bernard Butkovich, who attended a meeting at Wood's home, is an agent with the U.S. Bureau of Alcohol, Tobacco, and Firearms. Butkovich is expected to be called to the trial as a defense witness. He was ordered to infiltrate the Nazi organization as part of an ATF investigation of possible federal firearms law violations.

For the first time in the trial, prosecutors attempted to counter defense lawyers'

efforts to capitalize on patriotism. Defense attorneys have seldom missed an opportunity to emphasize to the all-white conservative jury the defendants' avowed patriotism and strong anti-communist sentiment.

Monday, while questioning Wood, Greeson emphasized the organization's racist and anti-semitic history under World War II German leader Adolf Hitler.

"Did you know it's a Nazi principle to gas Jews, Mr. Wood?" Greeson asked. Wood said he didn't know that and that he didn't "have anything against Jews." He testified earlier that his stepfather is Jewish.

Wood's testimony followed that of Lincolnton Klansman Harold Flowers, 33, who said last week the van in which he, Wood, and several others were riding became blocked in the front and rear by other vehicles. He said they fought to protect themselves and to fend off a Communist attack on a Klan car carrying several women.

(See Wood: A-13, Col. 1)

Wood Claims He Shot Over Heads

FROM A-1

However, during cross-examination Monday, Flowers admitted to Assistant District Attorney Jim Coman he didn't tell police about going to protect the women. He also conceded photographs of the caravan taken by police following the van and while the shooting was going on didn't show any cars blocking the van's escape. He insisted, however, that a car blocked their escape.

Whether the Klansmen and Nazis could have escaped by driving away rather than taking up arms has become a crucial issue in the self-defense case of the defendants, Wood, however, wasn't questioned about that Monday during questioning by his lawyer Robert Cahoon or by Greeson. He will resume his testimony this morning.

While testifying Monday, he talked calmly and confidently at first but became defensive at times during cross-examination and appeared tired at the end of the day.

During direct examination by Cahoon, Wood said he watched the Communist demonstrators through the van's windshield when he heard someone yell, "They're attacking the cars."

Like Flowers' testimony last week, Wood said Hickory Klansman Terry Hartsoe cried out, "My wife's in that car." But also like Flowers, Wood conceded he never told police about that during interviews.

At any rate, everyone jumped out of the van and charged toward the Communists, Wood said. They met them near a pickup truck in the intersection of Everitt Street and Carver Drive where a vicious stick fight ensued, Wood said.

He said he saw a demonstrator swing a shotgun and then cock it just before sticking the end of the barrel against the forehead of Klansman Roy Toney. Toney, a 33-year-old Gastonia man, will be tried later on murder and rioting charges in connection with the incident. Toney wrestled the shotgun away from the man, Wood said.

Cahoon has argued CWP leader James Waller, who was killed in the gunfight, held that shotgun that day.

Seconds later, Wood said he saw two more shotgun-wielding Communists running toward the fray.

That is when "I broke and ran" stopping long enough to yell at embattled Klansmen and Nazis: "Watch out, they got guns. They gonna shoot us. They gonna kill us," Wood said.

He yelled at Fowler to open the trunk of the car where he and others had put weapons before driving to Everitt and Carver.

His first shot went up in the air, he said. His second and third shots were level but aimed over the Communists head, and the fourth shot was at the rear of a car, Wood claimed.

Wood reloaded but did not fire any more.

All of this shooting was entirely unexpected, Wood said. He said the Klansmen and Nazis had planned a peaceful counter demonstration. He recalled how he and other Nazis, along with Butkovich, and some Klansmen discussed their non-violent intentions.

Butkovich was at the meeting, according to Wood. But Wood didn't detail what role Butkovich played in the planning of the Greensboro trip.

Despite the plans for non-violence, Wood admitted he took his 12-gauge shotgun loaded with birdshot pellets with him.

On cross-examination, he said one of the Klansmen at the meeting pointed a rifle at his television set during a newscast about the CWP's upcoming march.

Greeson contended that Wood, in police interviews, identified the man as Smith and said Smith snarled, "kill the Communists."

Indicate page, name of newspaper, city and state.

A-14
Greensboro Daily News
Date: Greensboro, NC
Edition: 9-27-80
morning

(Mount Clipping in Space Below)

Title: CWP

Character:
or

Classification:

Submitting Office: Charlotte (GRA)

CWP Leader Is Acquitted

Communist Workers Party leader Nelson Johnson of Greensboro Friday won another round in his continuing legal battles when District Court Judge Elreta Alexander-Ralston found him not guilty of assaulting an officer last month.

The judge ruled that Assistant District Attorney Lawrence McSwain did not prove that Johnson purposely assaulted the officer. Alexander-Ralston said Johnson may be guilty of resisting arrest but not of assault.

Johnson was arrested and charged in early August during a hearing on whether bail for riot charges stemming from the Nov. 3 shootings of five party members should be raised to \$100,000.

Superior Court Judge D. Marsh McLelland, temporarily assigned to Greensboro from Burlington, ordered Johnson removed from the hearing after he made repeated statements in court despite the judge's order to remain silent. McLelland had denied a request by Johnson's attorney to allow the CWP leader to address the court.

While officers were escorting Johnson from the court a scuffle started and Johnson allegedly hit Deputy Sheriff Fred Parris with his elbow.

After the arrest a Guilford County magistrate put Johnson in jail under \$100,000 bond. Leon Stanback, appointed to represent Johnson at the bond hearing, said the bond was extraordinarily high and "unusual for that type of offense."

The next morning Alexander-Ralston reduced the bond from \$100,000 to \$200 because, she said, she had known him since he was a student in the late '60s and because he had never disrupted her court.

Later that week McLelland refused to raise Johnson's bond.

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OCT 2 1980	
FBI - CHARLOTTE	

(Indicate page, name of newspaper, city and state.)

Pg D-1

Daily Times-News

Date: Burlington, NC

Edition: 9-18-80

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SEARCHED _____	INDEXED _____
SERIALIZED _____	FILED _____
SEP 30 1980	
FBI - CHARLOTTE	

Title: Greenkil

Character:

or

Classification:

Submitting Office: Charlotte (GRA)

State rests case

98 witnesses in 6 1/2 weeks of testimony to prove KKK-Nazis killed 5 communists

By SUE JONES
Staff Writer

GREENSBORO — The state tentatively rested its case Wednesday against six men charged with murder and rioting in the Nov. 3 KKK-Nazi confrontation with the Communist Workers Party here after six-and-a-half weeks of testimony.

Guilford County assistant district attorneys Rick Greason and Jim Coleman told presiding Superior Court Judge James M. Long they may call one additional witness next week — bringing the total to 98 — as well as tie up loose ends in an effort to insure that the evidence piled high on four conference tables in the courtroom has all been properly introduced.

Among the hodge-podge of case-connected paraphernalia are items as diverse as a guitar, a straw hat with red feather and an American flag as well as posters used by the CWP, at least a dozen shotguns, rifles and pistols, camera equipment, a folding lawn chair and boxes and brown paper-wrapped evidence the contents of which could not be discerned by a casual observer.

Motions from both the prosecution and the defense are also slated to be heard when court reconvenes Monday, including a state motion to allow jurors to view the Everitt Street-Carver Drive scene of the Saturday melee ten months ago that left dead five CWP members among those participating in a "Death to the Klan" march.

In his statement excusing the six-man, six-woman jury and four alternates until Monday, Judge Long directed "all jurors to take a recess

although the rest of the court will have to continue" working. "If the state desires to offer more evidence, it should do so Monday," Long said.

"After the state (formally) rests," Long told jurors, "we will hear motions in your absence concerning the sufficiency of it." He indicated to attorneys for the prosecution and the defense that he needs the time to review the states' case and evidence presented thus far in an effort to determine "not only where it came from but how it is related."

Testimony and court action Wednesday seemed decidedly anticlimactic in what may well be the closing day of the states' case against Roland Wayne Wood, 35, Jack Wilson Fowler Jr., 28, Lawrence Gene Morgan, 27, Jerry Paul Smith, 33, David Wayne Matthews, 25, and Coleman Blair Pridmore, 36, each charged with five counts of first degree murder and one count of felony rioting.

Cross examination of FBI chemist Donald Havacost consumed most of the morning with first one, then another defense attorney quizzing him on the manufacture of ammunition and the inherent similarities of the 2,200 pieces of metal he analyzed in connection with this case.

After reviewing Havacost's stack of notes equivalent to a ream and a half of paper and posing seemingly repetitious and superfluous questions on the lack of professional reading material relating specifically to analysis of shotgun pellets, Judge Long cautioned the six defense attorneys not to repeat

questions already asked by another attorney in the interest of time.

The viewing of slow motion film by Greensboro television station WFMY-TV and Durham station WTVD-TV darkened the courtroom for nearly an hour and a half following the lunch recess. The slow-motion viewing of tapes from six television screens set up in the courtroom was apparently an effort to allow jurors to review and solidify mental images formed when these tapes as well as two others were shown at normal speed earlier in the trial.

Judge Long emphasized his earlier ruling that the tapes may be "admitted as substantive evidence, not limited to illustration of previous witnesses' testimony."

While individuals close to the case indicated Wednesday that U.S. Division of Alcohol, Tobacco and Firearms (ATF) agent Bernard Butkovich was in Greensboro, no formal mention was made in court of the agent reputed to have infiltrated the Nazi organization a year ago. There was some speculation that the state or defense might call him to the stand after questioning him about his actions with the group now on trial.

Judge Long said last month he would initiate the procedure for obtaining an out-of-state subpoena for Butkovich, who is currently assigned to the ATF Cleveland office, an informal arrangement between the defense attorneys, the District Attorney and the ATF has reportedly bypassed the formal subpoena.

(Indicate page, name of newspaper, city and state.)

Pg 13
Winston-Salem Journal
Date: Winston-Salem, NC
Edition: 9-25-80

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Title:

Character: Greenkil
orClassification:
Submitting Office:

FBI Agent Pinpoints Gunshots

By Michael P. Massoglia
Staff Reporter

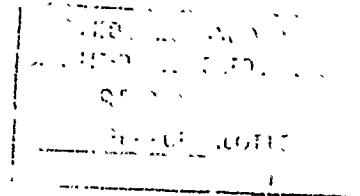
GREENSBORO — Defense attorneys in the murder trial of six Ku Klux Klansmen and Nazis called their first witness yesterday, but most of his testimony came during cross-examination and helped the state with its case.

Under direct examination, Bruce E. Koenig of the FBI testified that his analyses of television videotapes showed that 17 of the 39 shots fired at the anti-Klan rally here last Nov. 3 came from where Communist demonstrators were.

That testimony was significant for defense attorneys, who have argued that their clients acted in self-defense in the shooting deaths of five Communist Workers Party members.

But under cross-examination, Koenig was able to narrate slow-motion videotapes of the rally that showed several defendants shooting guns and advancing

See Key, Page 20



Continued From Page 13
toward a group of anti-Klan demonstrators.

In order for a killing to be done in lawful self-defense, a defendant must be without blame in initiating the affray and must try to retreat, according to state law.

Jurors in Guilford Superior Court had seen the slow-

motion tapes before the state rested its case last week, but yesterday they were able to hear Koenig describe individuals shooting guns.

"He's just fired now," said Koenig, pointing to a man an earlier witness had identified as Jerry Paul Smith of Maiden. "You can actually see smoke from his gun."

Besides Smith, Koenig described and pointed out on a television monitor three others shooting at the rally. Based on descriptions given earlier, they were Jack Wilson Fowler Jr. and Roland Wayne Wood, both of Winston-Salem, and David Wayne Matthews of Newton.

Also being tried on charges

first-degree murder and felonious rioting are Lawrence Gene Morgan and Coleman Blair Pridmore, both of Lincolnton.

Koenig's testimony showed that about 40 percent of the gunfire came from anti-Klan demonstrators. Although Koenig indicated that the first two shots came from the front

of a caravan of Klansmen and Nazis, the defense contended that the next three shots came from demonstrators.

The evidence will show that these shots were fired by Communists or members of the KKK, said Matthews' attorney, Percy Wall, during his opening argument yesterday. "They (the

defendants) returned fire in defense of themselves."

Koenig said that he could not pinpoint the location of the third, fourth and fifth shots at the rally, except to say that they were fired in a broad area that included the intersection and places where demonstrators had been seen. The locations of the other 36

shots at the rally, Koenig said, could be pinpointed to within several feet. The defense put a clear, plastic overlay on a four-by-eight wall diagram of the neighborhood, and Koenig put a red circle where he said the shots had come from.

The state will resume its cross-examination when court reconvenes this morning.

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Title: Greenkil
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Classification:
Submitting Office: Charlotte (GRA)

Jurors Won't See Site of Killings

By Michael P. Massoglia
Staff Reporter

GREENSBORO — Jurors will not be taken to the site of the fatal anti-Klan rally here last Nov. 3, a judge ruled yesterday, leaving defense attorneys with a minor victory as they call their first witnesses in the case today.

Judge James M. Long of Guilford Superior Court denied the state's motion to have the jury view the Morningside Homes community where five Communist demonstrators were shot to death.

Long denied that motion without prejudice, meaning that the district attorney may make the same motion later in the trial.

Six Ku Klux Klansmen and Nazis are on trial for murder and riot, and their attorneys argued yesterday that it would be foolish to have the jury taken to the intersection of Everitt Street and Carver Drive, where gunfire erupted at the rally.

"It would cause more excitement in that intersection than if a circus came to town and set up in the middle of it," argued Robert S. Cahoon, who represents Roland Wayne Wood of Winston-Salem. "I can't imagine anything more irrational."

Neill Jennings, who represents Jerry Paul Smith of Maiden, added that security would also be a problem if jurors, defendants, attorneys and other court personnel were taken to the scene.

"Our clients are members of groups that are not particularly popular in that neighborhood," Jennings said. "Security would be a major problem."

But District Attorney Michael A. Schlosser argued that a jury view of the site is necessary for jurors to get a true picture of the rally scene.

"When you consider the small size of the kill zone, it was like shooting fish in a barrel," Schlosser argued.

"That is the impression that will be reflected on them (jurors)."

The Communist Workers Party was gathering for a "Death to the Klan" rally when a caravan of Klansmen and Nazis drove down Everitt Street past Carver Drive. A melee ensued, then gunfire; defense attorneys have argued that their clients acted in self-defense.

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SEP 25 1980
FBI - CHARLOTTE

In support of that claim, the defense will call today as its first witnesses in the trial FBI acoustical experts who analyzed television videotapes of the rally.

One defense attorney maintains that the experts testimony will show that about 40 percent of the gunfire at the rally came from anti-Klan demonstrators.

The way was cleared for the defense to open its case when the state concluded a review of its evidence yesterday. Also yesterday, defense attorneys argued several motions, and Long made the following rulings;

— Denied motions to drop or reduce charges of first-degree

See Jury, Page 29

Jury Won't Go To Killing Site

Continued From Page 17

murder and felonious rioting against the defendants.

— Denied a motion to strike the testimony of an FBI nuclear chemist who circumstantially linked pellet fragments to shotguns and live ammunition in the defendants' possession. The fragments had been found in the bodies of four of those killed.

— Delayed a ruling on the testimony of Edward R. Boyd, a television cameraman for WTVD-TV in Durham. Boyd had identified five of the defendants in court, but defense attorneys challenged his ability to do so. Long said that he would rule on the matter after reviewing statements that Boyd had given to investigators.

— Agreed to remove from evidence guns and ammunition taken Nov. 6 from the home and car of Raeford Milano Caudle of Winston-Salem. Caudle had originally been charged with conspiracy to murder, but that charge was later dropped when no indictments were sought against him.

Indicate page, name of newspaper, city and state.)

B-1

Daily Times-News

Date: Burlington, NC

Edition: 9-23-80

Daily

(Mount Clipping in Space Below)

Title:

Character: Greenkil

or

Classification:

Submitting Office: Charlotte (GRA)

Bullets and fragments!

on center stage!

By STEFAN BECHTEL
Staff Writer

GREENSBORO — Though state prosecutors in the trial of six Klan Nazi murder suspects tentatively rested their case last Wednesday following a presentation of evidence lasting nearly seven weeks, additional details in the state's case occupied the court Monday.

Officials from the Greensboro Police Department's evidence room spent the

day on the witness stand, testifying to the whereabouts of scores of items of physical evidence between the time that the items were seized by the police and their introduction at the trial.

Though tedious, establishing this "chain of custody" is necessary before items may be formally introduced into evidence.

Among the thousands of items already testified to in the trial — ranging from bloody clothing and placards

KKK-Nazi trial

to a dozen weapons of various kinds — are about 2,000 bullets and bullet fragments.

Earlier testimony indicated the fragments were either found at the scene of the Nov. 3 confrontation between Communist Workers Party demonstrators

and a group of Ku Klux Klansmen and Nazis or removed during autopsies performed on five CWP activists who were killed during the wild exchange of gunfire that resulted in murder charges against the six defendants.

Last week FBI metals expert Donald Havekost, who performed comparative tests on the fragments, testified to the dates that each one was in his possession.

ACCOUNTED FOR

Completing the chain of custody testimony Monday, Greensboro police officers C.F. Brande and Fred Wilson told the court when each bullet or fragment was taken to the FBI's Washington laboratory for analysis and when returned.

Assistant District Attorney Rick Greeson, who conducted the questioning for the state, said he "won't leave a

single fragment uncovered," though he said he was unsure how long that process might take.

Superior Court Judge James Long, however, in addressing the jury at the close of court, said it "appeared likely" that the chain of custody testimony would be completed today, and jurors would be dismissed from the courtroom while the state argued several remaining motions.

See **KLAN** On Page 10B

• Klan •

Continued From Page 1B

Among those motions is one requesting that the jury be taken to the intersection of Everitt Street and Carver Drive, the southeast Greensboro street corner where the shootings occurred.

District Attorney Michael Schlosser said last week the area is so tightly enclosed by apartment buildings and store fronts, "it was like shooting fish in a barrel...I think the jury should see that."

Defense Attorney Robert Cahoon — who, during his opening statement seven weeks ago claimed the tight intersection was "deliberately chosen by the CWP to entrap the defendants" and that they were unable to retreat when a fight broke out — has complained that a visit to the scene might pose a security risk.

Evidence to support the defense team's side of the story, expected to take about two weeks to present, will begin when the state rests its case. The defense has contended its clients fired only in self defense.

'STILL COVER-UP'

Also Monday, CWP leader Nelson Johnson, at a news conference near the courthouse, told reporters even if the six defendants are convicted of first degree murder, the trial "is still a cover-up" because other involved parties including nearly 20 Klansmen at the scene; federal agent Bernard Butkovich, who is alleged to have infiltrated the Nazi group; and police in-

formant Ed Dawson — have not been indicted.

He said a recent editorial in *The Wall Street Journal*, which "dismissed the CWP as a violent fringe group with no popular support," was "part of a wave of systematic repression designed to keep the lid on the people's angry resistance in the face of the worst economic crisis in our history."

Johnson said Gov. Jim Hunt had "unleashed a barrage of propaganda" in recent weeks in an effort to make the CWP appear dangerous and "set us up for more trumped-up charges and fascist attacks."

He said a total of 21 charges had been filed against CWP members or supporters in the wake of the Nov. 3 incident, including those of felony rioting, contempt of court, assault and malicious damage.

"If the government can murder the CWP five in broad daylight and get away with it, the attack will spread to everyone who speaks out against social injustice," Johnson said.

CWP spokesmen have contended the Nov. 3 shootings of Sandy Smith, Michael Nathan, James Waller, William Sampson and Cesar Cauce were "assassinations" orchestrated by local, state and federal governments.

Charged with five counts of first degree murder and felony rioting are two American Nazis, Roland Wayne Moody, 35, and Jack Wilson Fowler Jr., 28; and four Klansmen: Lawrence Gene Morgan, 27; Coleman Blair Pridmore, 36; Jerry Paul Smith, 33; and David Wayne Matthews, 25.

Indicate page, name of newspaper, city and state.
Pg 13
Winston-Salem Journal
Winston-Salem, NC
Date: 9-20-80
Edition:

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Title:

Character: CWP
or

Classification:

Submitting Office: Charlotte (GRA)

Communists

Interrupt Hunt Speech

at NCCU



AP Wirephoto

Floris Cauce shouts at Gov. James B. Hunt Jr. during Hunt's speech in Durham.

From Journal Wire Reports

DURHAM — Gov. James B. Hunt Jr., interrupted by shouts from Communist Workers Party demonstrators, reaffirmed Friday the state's commitment to minority education at the dedication of North Carolina Central University's new law school building.

"We have all been reading and hearing lately about some of the problems that go along" with NCCU's mission to educate minorities, Hunt said. "I want to say as governor that I believe in this law school."

Floris Cauce, a CWP member, interrupted the speech shouting, "Governor Hunt, you killed my husband." Caesar Cauce died in a shootout during a confrontation between the CWP and the Ku Klux Klan in Greensboro last Nov. 3.

Durham police arrested Ms. Cauce. She was charged with disorderly conduct.

Five CWP members carrying placards and chanting "Hunt, Klan, SBI murdered the CWP five" picketed the dedication, attended by about 300 people seated outside of the new building.

Hunt said later that he didn't feel threatened by the demonstrators, although he acknowledged "you never know what they have in mind."

Several threats have been made against the governor and his family by people who say they are CWP members. Hunt drew the ire of the CWP when he suggested that the state should infiltrate such extremist groups.

Security around Hunt was increased significantly after the confrontations. Durham police officers, NCCU campus policemen, Hunt's security force and a SWAT team were all at yesterday's ceremony.

U.S. Supreme Court Justice Potter Stewart, the director of the American Bar Association's accreditation service, also spoke at the dedication.

The predominantly black law school has come under scrutiny because its graduates have done poorly on state licensing examinations. In a recent test, 18 of 76 NCCU graduates who took the test passed.

The scores sparked speculation that the school might lose its accreditation, but the governor moved to put those fears to rest.

Hunt said the school is taking steps to improve its passing record, including changes in admission requirements, grading and faculty; improvements in the law library; instituting evening law classes; and tripling the school's operating budget.

NCCU's problems "are not of the law school's making," Hunt said, but are really "inherited problems that have to do with our whole educational system and our political and economic systems."

North Carolina has been "making great strides" in public education with its primary reading program, annual testing, competency testing and the reduction of class size, he said.

The programs are designed to "help give the students who enter this law school the tools they need to compete with their fellow students."

Stewart, noting that the courtroom in the new law school would be named after former Chief Justice Earl Warren, said that the Warren court's ruling on Brown vs. Board of Education "changed for all time the social history of our country."

Reminiscing about the Warren years, Stewart said, "Warren was not a brilliant man ... in fact, I wouldn't be surprised if he didn't pass his bar exam the first time he tried."

Stewart was introduced by Judge Richard C. Erwin of the state Court of Appeals. Erwin has been nominated for a federal judgeship and will become the first black U.S. district judge in the state if his nomination is approved by the Senate.

Dean H. E. Groves of the NCCU School of Law criticized the news media for implying that the school was in danger of losing its accreditation because of the low passing rates on the bar exam.

"There has been an orgy of page one banner headlines of the size of type usually reserved for World War III or the second coming of Christ," said Groves.

Groves then introduced James P. White, ABA legal education consultant, and noted that "he has brought no locks and chains to close the school."

White affirmed that the NCCU Law School is "fully approved" by the ABA and that the school's "future is bright."

In an interview after his speech, White said, "If a school showed a dramatic decrease in bar pass rates over several years, it might cause a loss in accreditation. We don't anticipate that for NCCU. We anticipate an improvement."

White said that new instructors, new students and new facilities at NCCU affirmed his optimism. "ABA is very excited about the future of the school," he said.

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spaper, city and state.)
Pg 13
Winston-Salem Journal
Winston-Salem, NC
Date: 9-18-80
Edition:

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Title:

Character: Greenkil
or

Classification:

Submitting Office: Charlotte (GRA)

Rally Trial to Resume Monday

Prosecution Finishes Its

Case

By Michael P. Massoglia
Staff Reporter

GREENSBORO — After showing the jury two slow-motion videotapes of the anti-Klan rally here last Nov. 3, the state ended its case against six Ku Klux Klansmen and Nazis charged with murder.

In vivid detail, the tapes showed several defendants shooting guns during a melee at the rally that left five Communists dead.

Following the videotapes, Judge James M. Long of Guilford Superior Court recessed the trial until Monday, when defense attorneys are expected to argue that first-degree murder charges against their clients be dropped.

Long will spend the recess verifying that the state properly introduced its evidence during the past 6½ weeks of testimony. Prosecutors will be allowed to call additional witnesses Monday should Long deem it necessary for all the evidence to be allowed.

Also Monday, prosecutors are expected to argue in support of their motion to have the jury taken to the predominantly black Morningside Homes community where the rally was held.

During the showing of the videotapes the jury got what amounted to a firsthand look at the neighborhood, including the intersection of Everitt Street and Carver Drive where a stick fight took place between anti-Klan demonstrators and men from a caravan of Klansmen and Nazis.

Some of the participants in that fight could be clearly seen on the tapes, and because of an agreement reached last week between defense attorneys and prosecutors, jurors were allowed to use the tapes to identify defendants at the scene.

"I will remind the jurors that these videotapes may be used as substantive evidence and not limited to illustration of previous

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SEP 21 1980
FBI - CHARLOTTE

Indicate page, name of newspaper, city and state.)

D-2

Greensboro Record

Greensboro, NC

Date: 9-18-80

Edition:

(Mount Clipping in Space Below)

Title: Greenkil

Character:

or

Classification:

Submitting Office: Charlotte (GRA)

Testimony of agent an option

BY MARTHA WOODALL
Record Staff Writer

Federal undercover agent Bernard Butkovich now is scheduled to be available to testify in the Ku Klux Klan-Nazi murder trial beginning Monday.

Defense attorneys had expected Butkovich to arrive in Greensboro this past Wednesday but there was a mix-up with the district attorney's office over the date of his appearance.

The district attorney's office had agreed to make Butkovich available to testify for the defense in the trial of six Klansmen and Nazis facing five counts of first-degree murder stemming from the Nov. 8 shootings.

The defense attorneys want to discuss with Butkovich what he heard when he attended a planning meeting for the Klan-Nazi caravan Nov. 1.

The defense says it may not put Butkovich on the stand if he refuses to discuss his testimony in advance.

None of the six court-appointed defense attorneys has spoken with Butkovich, a special agent with

the U.S. Treasury Department's Bureau of Alcohol, Tobacco and Firearms.

The district attorney's office has said that it has no plans to ask Butkovich to testify.

Butkovich, assigned to ATF's Cleveland, Ohio, office, infiltrated the Forsyth County unit of the Nazi party for four months beginning last summer.

While operating under the cover of a long-distance truck driver, Butkovich attended several Nazi functions including a Nov. 1 meeting at the Winston-Salem home of defendant Roland Wayne Wood during which the Nazis decided to participate in the Nov. 8 Greensboro caravan with several Klan factions.

The defense has indicated that Butkovich's testimony may bolster their claims that the violence that erupted when the caravan met anti-Klan demonstrators had not been planned.

ATF officials have refused to discuss Butkovich's North Carolina assignment other than to say he was investigating reports that individual Nazis may have possessed illegal automatic weapons.

No Nazi was charged with firearms violations.

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SERIALIZED	FILED
SEP 20 1980	
FBI - CHARLOTTE	

icate page, name of newspaper, city and state.)

B-1
Daily Times- News
Burlington, NC

Date: 9-16-80
Edition:

(Mount Clipping in Space Below)

Title: Greenkil

Character:
or

Classification:

Submitting Office: Charlotte (GRA)

Technical evidence points

accusing finger

By STEFAN BECHTEL
Staff Writer

GREENSBORO — An FBI chemist, testifying in the trial of six Klan-Nazi murder suspects Monday, linked fragments from bullets that killed four of five Communist Workers Party demonstrators last Nov. 3 to live ammunition and other fragments found at the scene of the shootings.

Drawing on the results of sophisticated tests designed to match up lead types, FBI neutron activation analysis expert Donald Havacost said he had matched lead fragments removed from the bodies of Michael Nathan, James Waller, Sandy Smith and William Sampson with other samples already introduced as evidence.

Following a lengthy hearing in the absence of the jury, in which defense attorneys attempted to discredit Havacost's testimony, Superior Court Judge James Long allowed him to express his opinion on the test results as an expert in the field.

Long cautioned Havacost, however, that due to a slight margin of error involved in some of the tests, he should express his findings as opinion and not as matters of fact.

When the jury returned to the courtroom, Havacost testified three buckshot pellets removed from the body of William Sampson matched lead in a live shell earlier testimony indicated had been loaded and ejected from a shotgun owned by defendant David Wayne Matthews.

Havacost, who said he conducted tests on 2,200 lead

samples in connection with the case, testified the fatal fragments did not match any other samples. He said both the live shell and the fragments were No. 4 buckshot.

A Gullford County jailer, testified earlier in the trial Matthews told him: "They can't hang me for all of 'em, I only got three of 'em." He said Matthews added "something about a shotgun doing the job."

Klan
Nazi
trial

Several fragments removed from the body of James Waller also matched shells loaded into and ejected from Matthews' shotgun, but loaded with larger, No. 00 buckshot, Havacost said.

He said five of the fragments he tested were No. 00 buckshot and four were No. 6 birdshot. Earlier medical testimony indicated the birdshot wounds were only superficial.

Defense attorney Robert Cahoon, counsel for defendant Roland Wayne Wood, has contended his client fired only birdshot Nov. 3.

Havacost said all the pellets he tested which were found in Nathan's body were No. 4 buckshot. Before he died, 48 hours after being shot, close to a dozen pellets were removed from Nathan's head and chest by a Greensboro neurosurgeon.

A scrub nurse at Moses Cone Hospital, who testified earlier in the trial, retook the witness stand Monday to testify the pellets were in fact the same ones the surgeon

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handed her after they were extracted from Nathan's head.

Havacost said a large slug physicians removed during the autopsy of Sandy Smith also matched live ammunition found at the scene.

Though Havacost has been on the witness stand more than three full days, the jury has probably not understood most of his testimony, since the hundreds of bullets, pellets and fragments are being referred to in court only by their exhibit numbers.

By introducing "the scrub nurse — who told the jurors where the fragments in question were found — state prosecutors began making clear the importance of days of tedious, technical testimony.

District Attorney Michael Schlosser said the state may complete its presentation of evidence today or Wednesday, though Judge Long has not yet ruled on an earlier motion that the jury be taken to the scene of the shootings.

The intersection of Everitt Street and Carver Drive, where the incident occurred, is "such a small, tight place — it was like shooting fish in a barrel. I think the jury ought to see it," Schlosser said.

He said slow motion videotapes, made from tapes taken by TV newsmen from WTVD and WFMY, would probably be shown to jurors today. Slow motion tapes from WGHP and WXII footage have already been shown.

In another development Monday, sources said a federal agent who infiltrated the Winston-Salem chapter of the

American Nazi Party prior to Nov. 3 would be available to testify in the trial this week.

Bernard Butkovich, an agent of the U.S. Treasury Department's bureau of Alcohol, Tobacco and Firearms (ATF) is tentatively scheduled to arrive in Greensboro Wednesday, under an informal agreement among defense attorneys, the District Attorney and the ATF.

However, defense attorney Robert Douglas said he was not sure if Butkovich will take the witness stand, because "we have not talked to him... whether he testifies will largely be determined by what he has to say."

Though Judge Long said last month he would initiate the procedure for obtaining an out-of-state subpoena for Butkovich, who is currently assigned to the ATF Cleveland office, the informal arrangement bypasses that process.

Schlosser does not intend to call Butkovich as a witness, and it is expected if the agent does take the witness stand it will be after the state rests its case this week.

Monday marked the beginning of the seventh week of evidence presentation — the 12th week of the trial, including the 29-day jury selection process.

Charged with five counts of first-degree murder and one count of felony rioting apiece are Roland Wayne Wood, 35, Jack Wilson Fowler Jr., 23, Lawrence Gene Morgan, 27, Jerry Paul Smith, 33, David Wayne Matthews, 25, and Coleman Blair Pridmore, 36.

Indicate page, name of newspaper, city and state.)

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Daily Times-News

Burlington, NC

Date: 9-20-80

Edition:

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Photo by Stefan Bechtel

Captain David Williams, commander of Greensboro Police Special Investigation Division

Special Division Chief keeps tab on CWP, KKK

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SEP 21 1980
FBI - GREENSBORO

By STEFAN BECHTEL

Staff Writer

GREENSBORO — "Some Communist Workers Party sympathizers were arrested in Raleigh after they stuck posters up at Governor Hunt's press office in Raleigh," Captain David Williams, commander of the Greensboro Police Department's Special Investigation Division, recalled on a recent afternoon.

"One of them said, 'Extreme times call for extreme measures.' Now, what does that mean? I'm not sure, but you've got to admit it's got a sort of alarming ring to it."

Being attuned to those "alarming

rings" is part of Williams' job. — or at least it became part of his job earlier this year, after the shooting deaths of five CWP activists on a Greensboro street corner brought this quiet Southern city into headlines around the world.

Since that time, CWP members or sympathizers have been arrested "so many times I can't keep 'em all straight," and the group has regularly made news here and around the country.

Heavy security has surrounded N.C. Gov. Jim Hunt in recent months, after CWP activists lobbed eggs at him during a Colorado governor's conference

CWP members have disrupted a Greensboro City Council meeting, a Hunt press conference and a speech by President Carter; and two CWP widows, after penetrating the security at the Democratic National Convention, sent Secret Servicemen scurrying when one of them set off a round of firecrackers.

GREENBORO NOT ISOLATED

"Greensboro is not isolated from the world — in New York City, (the CWP) took on the cops with clubs and helmets. We can't ignore that," Williams said. "In all honesty, I don't think this is a criminal group. They're a group with political beliefs they hold very strongly. You know — I don't think they're going to physically harm Governor Hunt... but the possibility is always there."

It's that potential for violence that has a police sergeant and three officers "keeping abreast" of the CWP full time.

"When you have a group of people who talk about the violent overthrow of the government, and participate in various and sundry criminal acts, the police department would be remiss if it didn't give that some attention. After all, we're charged with keeping the peace," Williams said.

A native of Burlington, Williams was originally charged with supervising internal investigations of the police department itself. But Nov. 3 changed all that, and the increasingly visible presence of the CWP and other "subversive" groups like the Revolutionary Communist Party forced a reorganization within the department.

The "Special Division" was originally formed in January of this year to gather information about the February 2nd Mobilization march. Williams explained. He said that event — a cross-town march by civil rights and leftist groups from around the nation — was something Greensboro Police Chief W. E. Swing realized was potentially explosive, given the tension of those times, divisiveness among the groups themselves, and the Ku Klux Klan's deadly "counter-demonstration" in Greensboro.

FIVE OFFICERS ASSIGNED

Five officers were assigned the task of determining who would come, how many, and from where.

"If you're preparing for a dinner party, you want to know how many are going to show... we wanted to be ready to appropriate the proper manpower," Williams explained. "It required a great deal of data to insure that the marchers were allowed to participate. We also had to investigate the possibility of a counter-demonstration."

How was it done? "Well, for one thing we read a lot of out-of-town newspapers. I read in the Cincinnati paper about a group raising money to come to Greensboro. So I just called 'em up and asked how many were coming. I've found the best way in the world is just to ask 'em," he said.

Feb. 2, which drew an estimated 5,000 marchers representing nearly 300 groups, was "a big success," Williams said. "You know you've been successful when nothing happens and you read in the paper the next day there were too many cops."

"THE POSSIBILITY OF VIOLENCE"

But since that time, the Special Division has continued to monitor groups whose rhetoric suggests the possibility of violence." Prior to the events of last fall, the department was simply not organized to do that, he said.

"Quite frankly, I had never even heard of the WVO (now known as the CWP) until November 3," he said, recalling his shock when he arrived at the scene of an anti-Klan march just as the ambulances were arriving, with five communists already dead or dying.

"I thought, 'this is not Greensboro,'" he recalled. "There were bodies lying around...women shouting communist rhetoric... I remember thinking, 'That's dedication. That's fanaticism.'"

As it turned out, the Greensboro Police Department had also been unaware of the significance of an incident which occurred four months earlier in

See SPECIAL on page 2A

Special

Continued from page 1A

the little Rowan County town of China Grove. In a tense, armed confrontation, Ku Klux Klansmen and WVO members faced off, and the Klan backed down.

"If a firecracker had gone off that day, a whole lot more people than five would have died," Winston-Salem Klan leader Joe Grady has said of that incident, which both the defense and the prosecution in the murder trial of six Klansmen and Nazis have agreed was the prelude to the Nov. 3 shootings.

"It turned out (CWP activists) Nelson Johnson, Willena Cannon, Rand Manzella and most of the five who were killed Nov. 3 were in China Grove that day, but we didn't know that then," he said.

Those names, along with those of CWP widows Dale Sampson, Signe Waller, Marty Nathan and Florja Cauce, are familiar to CWP watchers — but how many more of them are there? Williams says he doesn't really know.

GROUP'S SIZE ESTIMATED

"Based on the most visible members — the ones who always show up at the rallies and news conferences — it's basically 15. They don't talk in numbers; they say that's unimportant." Statewide, some have estimated the group's size at 80 members or sympathizers, he said — then threw his hands up, as if that were a number rolled out of a hat.

"We don't really see much community support for them, though," he added.

There are some problems coming up with hard numbers. First, the group has not been cooperative in helping the police establish "open channels of communication."

"They just hang up when we call you. I've approached them over at the courthouse and they just say, 'We have nothing to say to you,'" Williams said.

Given the difficulty of obtaining information directly, it is hard to distinguish between party members and those who only sympathize with or support the party. "I understand members have a strict moral code: no extramarital sex, no drugs, no alcohol. But again, I'm not sure," he said.

He said he was surprised to learn through news reports that Thomas Clark, a vocal supporter of the CWP who was jailed for contempt of court when he refused to testify in the Klan-Nazi trial, was not actually a member.

But exactly what is it the Special Division does?

"Well, there are a lot of rumors that fly through the city, and we check them out. We touch base with sources, hopefully keeping abreast of things." That day, he said, there had been a

trial rested their case.

'BUM RAP'

"So I just called up Harold Covington (a Raleigh party leader) and he said it was a bum rap. Well, it didn't make any sense anyway."

"Then — it's no secret — we ride by the homes of members... if there's a lot of cars, they're meeting, if there's no cars, we know they're someplace else."

Williams emphasizes the group is not "under surveillance — that sounds like we're tailing them, and we don't honestly know that much about their movements."

But he does admit with a smile that "I have no doubt the CWP knows who we are by name and face."

On the subject of a recent remark by Gov. Hunt, to the effect that "wild and crazy groups" like the CWP should be infiltrated, Williams said: "There is no law against infiltration of any group, but the law limits what you can do. You cannot entrap and you cannot commit a crime. But if the circumstances warrant it, I would have no ethical problem with it."

"It's like the traffic cop behind the billboard. People say, 'He's not playing by the rules!' But... what rules?"

"Look, if the CWP had a news conference and one of my men attended it, it would be an abridgement of his rights to prevent him from listening. A policeman is not working 'undercover' just because he's not wearing a uniform. I mean, you talk about 'infiltration' — what do you call Signe Waller getting into the Democratic Convention?"

What it all boils down to, he says, is a question of rights. The CWP had a right to attend a Greensboro City Council meeting, and they had a right to be heard. They did not, however, have a right to disrupt the meeting and thereby abridge the rights of other people who wished to be heard.

WHAT ABOUT KKK?

And what about the Klan?

"Well, we have one man who keeps up with the Klan. But you know, the Klan isn't really very active in Greensboro. Most of them are from Forsyth County and west of there. And the Klan is not as militant as the CWP in their rhetoric."

As to the immediate future, Williams said the Special Division faces two potentially explosive moments: the first anniversary of Nov. 3, and the day the jury returns a verdict in the Klan-Nazi trial.

"You might say we have a very active month coming up in terms of the potential for violence... when you ask

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Prosecution rests case; defense readies motions

BY JIM WICKER

Record Staff Writer

Prosecutors in the trial of six Ku Klux Klan-Nazi murder suspects completed presentation of evidence in the lengthy trial Wednesday afternoon and District Attorney Mike Schlosser said "no stone was left unturned in our quest for convictions."

"We presented all of the evidence we had; we have built our case. It is a matter for the jury to decide," Schlosser said.

Because of court rules, the district attorney declined to comment directly on the refusal of Communist Workers Party witnesses — at least two of whom were injured in the Nov. 3 confrontation — to aid in prosecution.

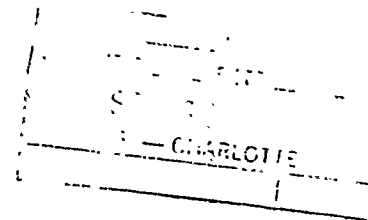
"In the trial of defendants in any cases of crimes against persons, it is reasonable to assume that the prosecution's case is weaker if victims who are survivors do not testify," Schlosser said.

Assistant District Attorney Rick Greeson rested the state's case at 3:50 p.m. and told presiding Judge James M. Long that the prosecution wanted the option to reopen its case. Long said if the state plans to offer any additional evidence, it should present it Monday.

Greeson's announcement of completion of evidence by the prosecution immediately followed the showing of two slow-motion films of the Nov. 3 confrontation at Carver Drive and Everitt Street. The films were made by the FBI lab from copies of videotapes filmed by WFMY-TV and WTVD-TV cameramen who witnessed the shooting.

Long, acting on a motion by defense attorney Percy Wall, recessed the trial until Monday. The recess will allow Wall and the five other state-appointed lawyers in the case to prepare arguments on motions and will give Long time to check evidence presented and determine that proper legal steps were followed on each item.

Klansman Joe Grady, who calls himself the imperial wizard of the "White Knights of Liberty," said today he will



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B-1
Daily Times-News

Date: Burlington, NC

Edition: 9-26-80

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FBI - CHARLOTTE	

Title:

Character: Greenkil

or

Classification:

Submitting Office:

Charlotte (GRA)

FBI agent says communists

fired on Klansmen

By STEFAN BECHTEL

Staff Writer

GREENSBORO — Members of the Communist Workers Party Nov. 3 anti-Klan demonstration fired shots at Klansmen during the melee there that left five demonstrators dead, an FBI agent testified for the defense in the trial Thursday.

The defense team's first witness, FBI audio expert Bruce Koenig, completed his testimony Thursday afternoon.

Koenig told the court he and FBI electronics technician Bill Parks worked on a report which pinpointed the location of all 39 gunshots he said were fired Nov. 3.

Wall contended in a statement to the jury Wednesday that at least 17 of the shots were fired by CWP demonstrators. Thursday Koenig was able to link only five of the shots to a demonstrator shown firing a pistol in the videotapes.

Koenig said a woman in a yellow rain slicker could be seen firing several shots in the direction of the Klan-Nazi group. CWP supporter Dorothy Blitz, who has been charged with rioting, was wearing a yellow raincoat Nov. 3 and appears on one videotape saying, "We only fired to defend ourselves."

When asked by state prosecutors how he determined the location of the shots, Koenig smiled and said it was a slow, tedious exercise based on the study of echoes from buildings, vehicles and trees in the area of the shootings.

He said an audio analysis of the John F. Kennedy assassination, based on a tape made by a motorcycle policeman at the scene, was not as sophisticated as the report he completed for this trial.

"In some ways, we had to go further than that study," he said.

Koenig said he was able to locate all except three of the shots within a margin of error ranging up to 10 feet in either direction. The third, fourth and fifth gunshots fired Nov. 3, he said, occurred in an area without clear echoes and at a moment when no useful visual information appears on the videotapes.

Koenig was able to place those three shots, which Wall has said were the most important shots fired, only roughly within a large area slightly north of the intersection of Everitt Street and Carver Drive, the scene of the incident.

Earlier in the trial, FBI ballistics expert Gerald Wilkes linked nine .223 cartridges found in Everitt Street to a semi-automatic rifle he said defendant Jack Wilson Fowler can be seen firing in videotapes.

But Koenig said that weapon, which has a very distinctive sound, fired only four shots Nov. 3. He agreed when Fowler's attorney, Jeff Farrar, suggested several spent shells might have fallen out of Fowler's pocket into the street.

Defense attorney Percy Wall said he believed it was the first testimony of its kind ever admitted as evidence in a trial in the state. It was based on examination of sound tracks taken from videotapes of the incident shot by TV newsmen.

WIFE ON STAND

Shifting uneasily in the witness stand with the jury watching, her voice sometimes breaking, the 18-year-old wife of a Ku Klux Klansman accused of murder recalled Thursday the events of last Nov. 3.

Renee Hartsoe, of Hickory, wife of accused Klansman Terry Wayne Hartsoe, said she and her husband came to a communist-sponsored anti-Klan rally in Greensboro that

Related story on D2

day and discuss incidents which preceded the Nov. 8 incident.

Grady, who has been listed as a witness for the defense, said he was not a member of the caravan which drove to the rallying point of the CWP's planned "death to the Klan" march that morning.

"I knew it was a trap. I told all of my boys to stay away from Greensboro that day," Grady said, explaining that the Klansmen on trial were not members of his group at the time, but came to Greensboro with another Klan leader, Virgil Griffin.

Since Nov. 8, however, the Klan defendants have become associated with Grady's group and Griffin is serving a jail term, on work-release, on conviction of a charge that he burned a

cross on a Lincoln County couple's lawn.

Grady said that a group of approximately 150 communists attempted to attack his group in China Grove several weeks before Nov. 8, and that he told the FBI that violence might occur later. Neither Grady or former Klansman Gorrell Pierce, now a Nazi affiliate, accepted the CWP's challenge in a letter to come to Greensboro on Nov. 8, he said.

Griffin also has been listed as a witness for the defense. The defendants will use self-defense as a defense, except for Jerry Paul Smith, who is expected to contend that he was struck on the head during the incident and was not conscious of what he was doing.

The trial began with jury selection on June 16 and the presentation of state's evidence, which included testimony by 97 witnesses, lasted for 59 days.

day to mingle in the crowd, find out what they were talking about and stand up for the rights of America when they started talking communism.

But she told the court she and three others fled the scene of the rally when a vicious stick fight and then gunfire broke out between Communist Workers Party demonstrators and the Klan-Nazi group.

She said she didn't learn her husband and other members of the group had been arrested until the next morning, when she read about the Greensboro shootings in a newspaper in Boone.

Thursday was the second day of evidence presented by attorneys representing six Klan-Nazi murder suspects charged in the deaths of five CWP activists, Terry Wayne Hartsoe, along with four other Klansmen, may be tried for murder later.

Hartsoe said she first heard of the Greensboro rally in mid-October, at a Klan meeting in Lincolnton. She said Stanley Klan leader Virgil Griffin showed the group a newspaper clipping in which the communists challenged Klansmen to come out from under their rock, then he asked the group if they wanted to go, and they took a vote on it.

She said when the group voted to attend the rally, Griffin said there was to be no violence, and no guns were to be taken along. Klansman Ed Dawson — later revealed to be a police informant — also advised against taking guns, she said.

But under cross examination by Assistant District Attorney Jim Coman, Hartsoe admitted her husband took a shotgun, and she saw two long-barreled guns in the trunk of defendant David Wayne Matthews' car.

She and several others rode to Greensboro with Matthews, she said, and met the rest of the group at a

house south of the city marked by a Rebel flag and an American flag on the front lawn. She said she saw defendants Coleman Blair Pridmore, Jerry Paul Smith and Lawrence Gene Morgan in the house.

Her husband rode to the rally in a van and she rode in a car. The van was later stopped by police and its occupants arrested, she said.

When the group arrived at the rally site, she said, "there was a crowd of people up there on the right...when we got up close to them people were yelling 'Death to the Klan,' kicking cars, hitting them with sticks...I scrunched down, because I was afraid they might break the windows out."

She said she got down real low when gunfire broke out, fearing she might be shot, but got up briefly and saw people "running away from our car carrying rifles or shotguns...I knew they wasn't Klan people."

Lisford Carl Nappier, a Klansman who has been charged with rioting, was "getting hit over the back with a stick" when she looked out, she said.

She said she and three others fled the scene in the car without any trouble and later went to Dawson's house in Greensboro, where he told them "the van got out of there safely, and people were headed back to Lincolnton."

But she, Griffin, Chris Benson and Mark Sherer drove to Boone that night, and stayed the next night in Columbus County, she said. "I didn't really want to go home until I found Terry, until I found out what happened," she said.

Under cross examination, however, Mrs. Hartsoe admitted the others had not gone home because they were afraid they were wanted for being in Greensboro.

She said she, Benson and Sherer were Klan members, and that her mother was a Klan leader in the Icard area, near Hickory.

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Daily Times-News
Burlington, NC

Date: 9-26-80
Edition:

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Classification:

Submitting Office: Charlotte (GRA)

The state rests its case

A summary of the

KKK-Nazi trial

By STEFAN BECHTEL
Staff Writer

GREENSBORO — "The highest goal of every legal contest is the ascertainment of truth," Assistant District Attorney Jim Coman told the 16 white men and women who had met each other for the first time several hours earlier, in Guilford Superior Courtroom 3C.

That first day of evidence in the murder trial of six Ku Klux Klansmen and Nazis — Monday, August 4 — was probably a rather confusing one for seekers of truth, with prosecutors and defense attorneys painting wildly dissimilar portraits of the events of Nov. 3, the day five communists were killed by gunfire on a Greensboro street corner.

Both sides agreed on a few things.

A vicious stick fight had broken out moments after nine cars crowded with Klansmen and Nazis showed up in front of a black housing project, where members of the Communist Workers Party were preparing for a cross-town "Death to the Klan" march and rally.

Threats and obscenities passed back and forth, and then a wild exchange of gunfire, estimated by witnesses at between 45 seconds and two minutes in length, took the lives of CWP leaders James Waller, Cesar Cauce, Michael

Nathan, William Sampson and Sandy Smith.

Six men were about to be tried on five counts of first degree murder and felony rioting apiece — charges that could send them to the gas chamber.

There the agreement ended.

The defense team claimed their clients had intended no violence when they came to Greensboro that day; that when they were "set upon" by taunting, stick-wielding communists, they began firing in self defense. But Coman, angrily shaking his finger at the six men sitting in black vinyl chairs across the room, claimed the state would show they had come to the rally "armed to the teeth" and coolly fired into a crowd of fleeing demonstrators, none of whom had even touched their cars.

The state rested its case Wednesday, after a presentation of evidence that lasted 31 days.

Essentially, the state's case is built on four videotapes of the incident taken by TV newsmen; complex scientific testimony, to link bullet fragments to weapons fired by the defendants; and eyewitness accounts — from reporters, residents, and policemen, since the CWP has refused to cooperate in the trial.

Prosecutors are also relying heavily

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FBI - CHARLOTTE

on what is known as the felony murder rule. That rule says that a person can be convicted of first-degree murder if he is involved in the commission of a felony during which someone is killed, even if he did not directly commit the killing.

The state contends all six were involved in a felony riot which resulted in five deaths. They also hope to prove some of the defendants committed murder "willfully and with premeditation," the usual requirement for a first degree murder conviction.

Day by day, as physical evidence gathered by the Greensboro Police Department, the State Bureau of Investigation and the FBI mounted, the third floor courtroom began taking on the look of a yard sale.

Shotguns, pistols, two semiautomatic rifles, sticks, placards, three lawn chairs, a 5-ft. length of chain, brass knuckles, an American flag wrapped around a Confederate one, hundreds of photographs, videotape cassettes, boxes of bloody clothing, even a battered straw cowboy hat with a jaunty red feather, are now scattered across the four tables set up in the middle of the room.

Underneath the tables sit boxes filled with plastic evidence bags containing hundreds of bullets and fragments; and

stacked against them, cardboard charts and diagrams, detailing autopsy, metallurgy, and ballistics reports.

"Not a stone has been left unturned in the preparation of this case," says District Attorney Michael Schlosser.

Dressed in cowboy boots and polyester leisure suits, sometimes with applique American flags stitched to their sleeves, the six defendants have patiently waited through it all, spending their weeknights in jail and — except for one — going home when court recesses. They have listened intently as the state catalogued its evidence against each of them:

- Klansman Jerry Paul Smith, a 33-year-old Maiden logger, a huge, shambling man with a drooping moustache and several long scars across his forehead. At the time of his arrest he was employed in a family-owned timber business started by his grandfather, and is described by a psychiatrist in court papers as "paranoid" on the subject of communism. He had been a member of the Klan three months Nov. 3. He is the only defendant directly linked to a specific killing.

Several eyewitnesses have testified they saw Smith charging down the

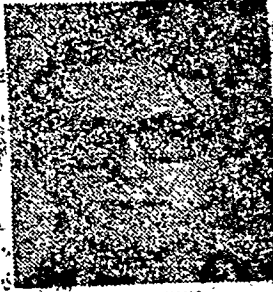
See SUMMARY on page 10A



FOUR WERE KILLED — Injured comrades of the Workers Viewpoint Organization were comforted after shooting erupted in Greensboro last Nov. 3.



SMITH



MATTHEWS



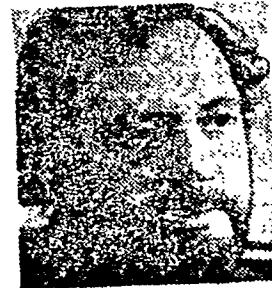
FOWLER



PRIDMORE



MORGAN



WOOD

...walk firing a pistol from each hand
... and a Durham TV cameraman
... id he saw Smith fire "point blank" at
...esar Cauce moments before he collaps-
...d to the ground.

Extreme slow motion reproductions
the videotapes (about 1/30th speed)
made by the FBI show Smith running
down the sidewalk, with blasts of
smoke coming out of the pistols.

A physician who performed the
autopsy on Cauce testified he was killed
by a single gunshot wound which "could
have" been fired from a .357 magnum
pistol, or by other handguns in the .38
caliber range, or even by a low velocity
rifle.

An FBI ballistics expert testified a
copper-coated bullet found in the street
near where Cauce fell was definitely
fired from a .357 magnum pistol found
in the front seat of a van Smith was
riding in when he was arrested.

An FBI expert in the analysis of
metals said the slug was cast from "the
same batch of lead" as two bullets
found in the .357, though no testimony
confirmed that was the weapon Smith
was firing.

Klansman David Wayne Matthews,
25, of Newton, is the youngest of the
defendants and an ex-Marine combat
veteran of Vietnam. He is the father of
three, with his wife expecting a fourth.
He has an implanted valve in his heart
and does not work as a result of it.

A jailer who was working the night of
Nov. 4, when suspects were being
booked at the Guilford County Jail,
testified Matthews told him they

can't hang me for all of 'em, I only got
three of 'em," then added "something
about a shotgun doing the job."

A number of eyewitnesses have
testified they saw Matthews firing a
"long-barrelled weapon" Nov. 3.

A 12 gauge shotgun Matthews bought
three days before the shootings, found
in the van he was riding in when he was
arrested, was linked by an FBI
ballistics expert to five spent shells and
11 others that were loaded into the gun
and later ejected unfired.

A metals expert said large buckshot
pellets removed from the bodies of
James Waller, William Sampson and
Sandy Smith matched either fired or
unfired shells linked to Matthews'
shotgun.

Nazi Jack Wilson Fowler, Jr., 28, of
Winston-Salem, a burly, red-haired
man who was once a Klansman, is the
only one of the six in jail without bond.
Both he and defendant Wood claim to
be "born again" Christians. Un-
married, he was living with his mother,
who died of cancer while he was in jail,
Nov. 3. He was working for a tire recap-
ping firm at that time. His father lives
in Maryland.

Fowler appears on the videotapes fir-
ing a semiautomatic weapon towards
the demonstrators with a calmness
several eyewitnesses have noted during
their testimony.

Fowler's cousin, a Winston-Salem
detective, testified Fowler disappeared
after the incident. He said Fowler
called him from a Chicago suburb 10
days later, saying he had dyed his hair

black and hitchhiked north, but was
"tired of running" and wanted to turn
himself in.

An FBI agent who said he talked to
Fowler by telephone to arrange his sur-
render quoted him as saying he had
"seen himself on television firing an
AR-180," but that he had disposed of the
weapon, which "belonged to a friend,"
by throwing it in a body of water.

The gun, owned by Winston-Salem
Nazi Raeford Milano Caudle, was found
by two youngsters near a rock quarry in
Winston-Salem.

A ballistics expert said nine .223 car-
tridges found at the scene were fired
from the weapon. None of the five
demonstrators were killed by .223
bullets, medical authorities said.

Klansman Coleman "Johnnie"
Blair Pridmore, 36, a Lincolnton
millworker, is the oldest of the defen-
dants and the father of three. He has a
ninth grade education and was em-
ployed at \$150 a week at the time of his
arrest. Like Smith, he was a member of
the Klan only three months at that
time.

Though several witnesses have said
they saw Pridmore holding a long-
barrelled weapon, only one said he ac-
tually fired toward the demonstrators.
Two live shells found in a shotgun iden-
tified as the one Pridmore was holding
matched fragments removed from
Sandy Smith's body, a metals expert
said. No spent shells were linked to the
weapon.

His attorney, Hal Greeson, has con-
tended Pridmore "realized he couldn't

kill a person" and pumped several
shells onto the ground. One unfired
shell linked to the weapon was found at
the scene.

Klansman Lawrence Gene Morgan,
27, of Lincolnton, is talkative, un-
married, and sports long black hair and
a neatly trimmed beard.

Only one eyewitness, a Durham TV
cameraman, has claimed he saw
Morgan with a gun Nov. 3. The
cameraman said Morgan was firing a
long-barrelled weapon in the direction
of the demonstrators. Robert Douglas,
his attorney, has contended Morgan
carried only a knife that day.

However, Morgan is the owner of a
van five defendants were riding in
when they were arrested, and was driv-
ing at the time.

Nazi Roland Wayne Wood, 35,
leader of the Winston-Salem chapter of
the American Nazi Party. A former
Klansman, Wood is a construction
worker and has one son.

Several witnesses have said they saw
Wood with a long-barrelled weapon
Nov. 3, but only one said he fired it.
Robert Cahoon, his attorney, has con-
tended the weapon was loaded only
with birdshot and that Wood fired it
harmlessly into the air. Medical
testimony has indicated James Waller
was struck by No. 6 birdshot, but that
the wounds were superficial.

Defense attorneys, during opening
arguments, admitted several planning
sessions for the Nazi group's Nov. 3
"counter-demonstration" took place in
Wood's home.

Klan Trial Winding Up ^{STAR} 11/1/80

GREENSBORO, N.C. — The defense team presented its final arguments yesterday in the trial of six Ku Klux Klansmen and American Nazis charged with murdering five Communist Workers Party members at a "Death to the Klan" rally last fall.

One lawyer argued that the defendants had acted in self-defense, much like the United States after Pearl Harbor, while another warned jurors not to be swayed by the great volume of testimony prosecutors have presented.

"You should concern yourselves, ladies and gentlemen, not with quantity, but with quality," said Percy Wall, attorney for defendant David Wayne Matthews.

The three-member prosecution team is to begin its final arguments on Monday, the anniversary of the Nov. 3 shootings.

Klansmen, Nazis Found Not Guilty

Jury Acquits Six In Shooting Deaths At Communist Rally

By Fred Barbash
Washington Post Staff Writer

Six Ku Klux Klansmen and Nazis were found innocent yesterday of murdering five Communist Workers Party demonstrators in Greensboro, N.C., in 1979.

The jury deliberated for seven days before finding the four Klansmen and two Nazis innocent of multiple charges of first-degree murder and felonious rioting. The verdicts followed 21 days of testimony during which the jurors watched videotapes of the fatal shootings. The tapes were made by television stations covering the communist-organized "Death to the Klan" rally a year ago on Nov. 3.

Sources said the Justice Department will review the case to determine whether federal charges should be brought against the defendants. Eleven other Klansmen and Nazis still face state charges in connection with the shootout between the two groups of extremists.

The deaths occurred after the Klansmen and Nazis formed a motorcade, armed themselves with shotguns, rifles and pistols and drove to the rally to confront the demonstrators. Epithets were exchanged, fights erupted and shots were fired. Within 88 seconds, according to testimony, four of the communists were dead and another six wounded. A fifth demonstrator died two days later. The dead were Sandra Smith, 29, a textile worker and labor organizer; James C. Waller, 37, a medical school graduate and organizer in textile plants; Cesar Vinton Cauce, 25, a hospital worker; William Sampson, 34, a former Harvard Divinity School student, and Michael Roland Nathan, 33, a Durham physician.

Defense lawyers argued that the Klansmen and Nazis fired in self-defense, out of fear for their lives, and said that government evidence failed to show that any of those charged actually fired the shots that killed the victims.

"They were attacked," defense lawyer Robert Cahoon told the all-white jury. "The truth is that they were not ex-

See KLAN, A11, Col. 1

TUESDAY, NOVEMBER 18, 1980

Subscriber
See Box

Washington Post

Klansmen, Nazis Found Not Guilty In Rally Slayings

KLAN, From A1

pecting violence. They were bent on a peaceful expression of the love of their country and its flag."

Prosecutors said the Klansmen and Nazis went to the rally bent on revenge, following a clash with the communists four months earlier near Winston-Salem. "They came to Greensboro intent on one thing and one thing only, to disrupt that rally," Assistant District Attorney James Coman said in his closing statement.

The prosecutors acknowledged during the trial that scientific evidence linked only two of the defendants to the fatal shots. But the others were guilty of murder as well, they argued, under a state law that a person participating in a riot in which a companion commits murder is also guilty of murder.

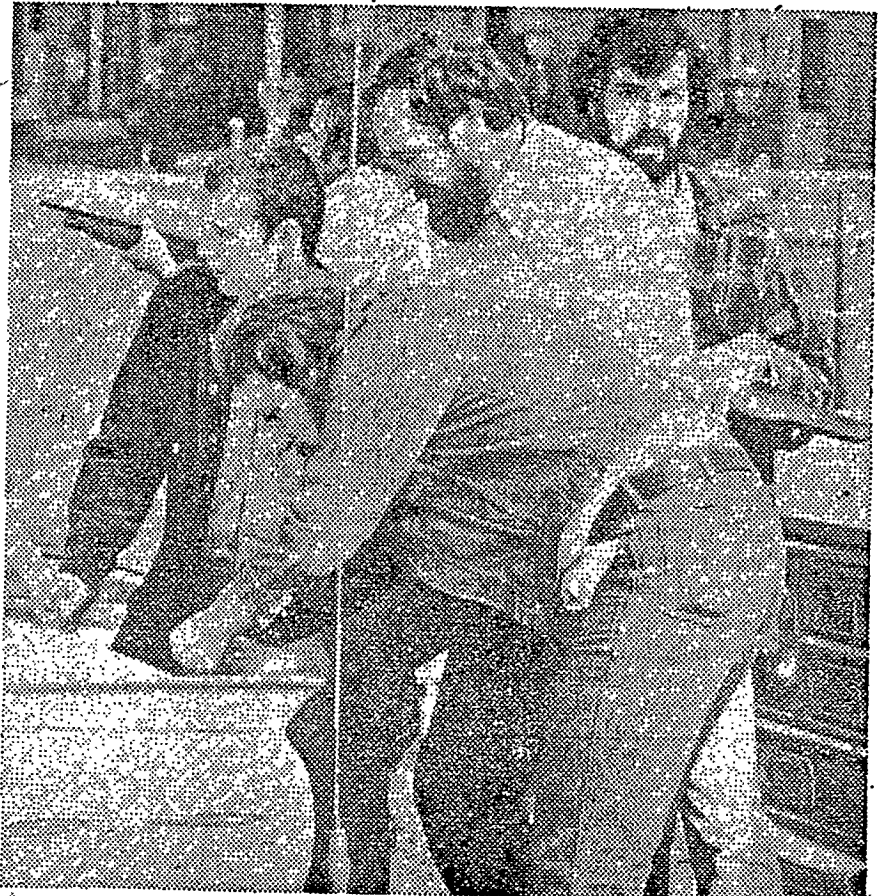
The defendants were Nazis Jack Wilson, 27, and Roland Wayne Wood, 36, and Klansmen Jerry Paul Smith, 33, Coleman Blair Pridmore, 27, Lawrence Gene Morgan, 28, and David Mathews, 24.

Five Communist Workers Party members are awaiting trial on rioting charges.

A federal review of the verdict would follow Justice Department practice in controversial, civil rights related cases. Most recently, the federal government brought charges after the acquittal of policemen in Miami in the death of a black insurance executive.

In the videotapes of the melee, some of the defendants were clearly recognizable firing weapons. The prosecution contended that Mathews alone killed four of the victims with a shotgun.

The riot attracted national attention



United Press International

Persons identified as Klansmen take weapons from car at 1979 Greensboro rally.

because of the dramatic television footage, played on the television networks the day of the shootings, and because

of continuing confrontations between the increasingly active Klan and the militant extremists of the left.

Recorded
11/26/79
kmm

JAN 15 PM

FEDERAL BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE

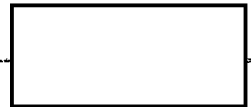
Laboratory Work Sheet

To: SAC, Charlotte (44-3527)

FBI FILE NO. 44-81521
LAB. NO. 0110983 E/S RD QZ
YOUR NO. S QV

Re: GREENKIL

Examination by:



b6
b7C

Examination requested by: SAC, Charlotte

FIREARMS - Wilkes

Reference: Letter dated 11/6/79

Examination requested: Video tape - Signal Analysis - Firearms

Specimens received: ^{Specimens} ~~Specimens~~ personally delivered by SA 
~~Charlotte~~

Q1 Video cassette tape labeled Sony KCA60

ALSO SUBMITTED:

One aerial photographic map

Q1 B7d- 1/7/80

Dictation attached

Essential



, Defense Attorney

b6
b7c

Monday Morning →

First wagon shown at 570 feet
second " " " 572 feet
third " " " 582 feet

TAPE #1

#1 at 110 feet 223

starts at 17 feet

method same

first weapon shown at 54 feet (possible revolver)

second " " " 60 feet revolver (probably)

third " " " 81 feet revolver (probably)

fourth " " " 226 feet revolver (probably)

end at 365 feet

TAPE #2

#2 at 359 feet

starts at 22 feet

sketches same

first weapon shown at 197 feet - truck

second weapon shown at 206 through 214 feet (possible car)

gun in yellow room and appears to have weapon

208 (carried by some individual) (two revolvers) probable

one pump shotgun POSS.

one AR-180 - POSS.

one possible shotgun

TAPE #3

starts at 33 feet

At 156 feet weapon is shown which is the same as the above two tapes

TAPE #4

starts at 22 feet Channel 2

First weapon shown at 177 feet same

Second weapon shown at ~~(220)~~ (221) feet and

again at 225 feet possible weapon at 208 feet

end of channel 2 at 533 feet

start of channel 8 portion of tape #4 at 555 feet

T1 - Shots 1-3 = 15.2 cm = 608 sec
 " 2-4 = 15.3 cm = 612 "
 " 3-5 = 15.65 cm = 626 "
 " 4-6 = 16.05 cm = 642 "

T2 - Shots 1-3 = 14.15 cm = 566 sec
 " 2-4 = 14.2 " = 568 "
 " 3-5 = 13.75 " = 550 "
 " 4-6 = 14.1 " = 564 "

Page 3 of

" 2-4 = 13.5 " = 540 "
 " 3-5 = 13.25 " = 530 "
 " 4-6 = 12.75 " = 510 "

T6 - Shot 1-3 = 15.15 cm = 606 sec
 " 2-4 = 14.6 " = 584 "
 " 3-5 = 14.55 " = 582 "
 " 4-6 = 14.65 " = 586 "

T7 - Shot 1-3 = N/A cm = _____ sec
 " 2-4 = N/A " = _____ "
 " 3-5 = 13.5 " = 540 "
 " 4-6 = 12.45 " = 498 "

(Misfire on shot #2)

Page 4 of

T-8 - Shot 1-3 = 13.05 cm = 522 sec
" 2-4 = 13 " = 520 "
" 3-5 = 12.55 " = 502 "
" 4-6 = 12.95 " = 518 "

T-9 Slot 1-3 = 17.35 cm = 694 sec
" 2-4 = 17.1 " = 684 "
" 3-5 = 17 " = 680 "
" 4-6 = 16.55 " = 662 "

Test 10 Shot 1-3 = 15.6 cm = 624 sec
" 2-4 = 15.6 " = 624 "
" 3-5 = 15.4 " = 616 "
" 4-6 = 15.2 " = 608 "

Test 11 Shot 1-3 = 15.6 cm = 624 sec
" 2-4 = 14.95 " = 598 "
" 3-5 = 15.05 " = 602 "
" 4-6 = 15.85 " = 634 "

Test 12 Shot 1-3 = 14.4 cm = 576 sec
" 2-4 = 14.5 " = 580 "
" 3-5 = 14.55 " = 582 "
" 4-6 = 14.6 " = 584 "

Test 13 - Shot 1-3 = 17.4 Cm = 696 sec
" 2-4 = 16.55 " = 662 "
" 3-5 = 17.05 " = 682 "
" 4-6 = 17.1 " = 684 "

Test 14 - Shot 1-3 = 15.6 Cm = 624 sec
" 2-4 = 16.2 " = 648 "
" 3-5 = 16.1 " = 644 "
" 4-6 = 16.2 " = 648 "

Test 15 - Shot 1-3 = 14.9 Cm = 596 sec
" 2-4 = 15.1 " = 604 "
" 3-5 = 14.2 " = 568 "
" 4-6 = 14 " = 560 "

Test 16 - Shot 1-3 = 14.3 Cm = 572 sec
" 2-4 = 13.85 " = 554 "
" 3-5 = 14 " = 560 "
" 4-6 = 14.15 " = 566 "

August 7, 1980

91109083 E RD QC

GREENKIL
TAPE EXAMINATION

A photogrammetric analysis was provided by the Document Section of the Laboratory, at the request of the Engineering Section, to assist in conducting an acoustical examination of evidence received in this matter.

Standard photogrammetric procedures were used to obtain the locations of various automobiles, trucks, a bus, and other objects from 35 millimeter still photographs, 16 millimeter movie film, videotapes and 70 millimeter aerial photographs taken during and subsequent to the killing of five individuals at Greensboro, North Carolina, on July 3, 1979.

The vehicles and objects are depicted utilizing an overlay on an orthographic engineer's drawing having a scale of 1 inch equals five feet. This map depicts the intersection, and surrounding area, of Carver Court and Everitt Street, Greensboro, North Carolina. The various vehicles which are located on this overlay and orthographic drawing were numbered in accordance with the numbering system established on various drawings supplied by [redacted] of the Greensboro, North Carolina, Police Department.

b6
b7c

Exec AD Adm. _____
 Exec AD Inv. _____
 Exec AD LES _____
 Asst. Dir.:
 Adm. Servs. _____
 Crim. Inv. _____
 Ident. _____
 Intell. _____
 Laboratory _____
 Legal Coun. _____
 Plan. & Insp. _____
 Rec. Mgnt. _____
 Tech. Servs. _____
 Training _____
 Public Affs. Off. _____
 Telephone Rm. _____
 Director's Sec'y _____

ND31

RA

RALLY DEATHS HEARING

GREENSBORO, N.C. (AP) --- MORE INDICTMENTS ARE EXPECTED IN CONNECTION WITH THE "DEATH TO THE KLAN" RALLY THAT LEFT FIVE MEMBERS OF THE COMMUNIST WORKERS PARTY DEAD, SAYS DISTRICT ATTORNEY MIKE SCHLOSSER.

SCHLOSSER TESTIFIED MONDAY AT A HEARING IN GUILFORD COUNTY SUPERIOR COURT ON DEFENSE MOTIONS SEEKING THE DISMISSAL OF CHARGES AGAINST NAZI AND KLAN MEMBERS INDICTED ON MURDER AND RIOTING CHARGES BECAUSE NO COMMUNISTS WERE CHARGED. HE DID NOT, HOWEVER, SAY THE NEW CHARGES IN THE NOV. 3 RIOT WOULD INVOLVE COMMUNISTS.

"I HAVE NEVER SAID I WOULDN'T PROSECUTE OTHERS. THE DISTRICT ATTORNEY IS DAILY REVIEWING NEW EVIDENCE," SCHLOSSER SAID. "IT IS OUR INTENTION TO INDICT OTHERS AS THE INVESTIGATION IS COMPLETED."

SCHLOSSER'S TESTIMONY CAME DURING A DAY-LONG HEARING BEFORE JUDGE JAMES LONG.

THE DEFENSE LAWYERS CONTEND THE COMMUNISTS STARTED THE FIGHTING AT THE RALLY IN A SOUTHEASTERN GREENSBORO PUBLIC HOUSING PROJECT. THE CWP SPONSORED THE RALLY.

ELEVEN OF THE DEFENDANTS ARE CHARGED WITH FIVE COUNTS EACH OF FIRST-DEGREE MURDER AND THE OTHER THREE ARE CHARGED WITH ENGAGING IN A RIOT. MOST CLAIM AFFILIATION WITH KLAN OR NAZI ORGANIZATIONS.

NO DECISION ON THE DISMISSAL MOTION WAS MADE MONDAY. SCHLOSSER WAS EXPECTED TO RESUME HIS TESTIMONY TODAY.

LONG WARNED THE DEFENSE THAT TO WIN DISMISSAL OF THE CHARGES THEY HAD TO DO MORE THAN SHOW THAT OTHERS COULD HAVE BEEN INDICTED.

"THE DEFENDANTS WERE ATTACKED WITH STICKS AND SHOT AT, YET NOT ONE (CWP MEMBER) WAS CHARGED," SAID STEVE SCHLOSSER, ATTORNEY FOR ROY CLINTON. "CLEARLY, THE COMMUNISTS ARE GUILTY OF INCITING A RIOT."

AP-WX-0325 1107EST

2. Reviewed pertinent scientific literature

1. Met with Greenboro PD, DA office FBI agents 7/30 11/79

3. In ^{early} 1/80 received original video tape ad film - copied at 15 fps southward
+ briefly interviewed cameraman ad reporter

5. Speed of sound determination

4. Type of exam - triangulation

~~Equipment used~~

7. Prepared video copies

6. Test slots at Quantico

Error calculation

b6
b7c

11
12. Plotometric - SA

14 Measurement of echoes - msec, meters, feet - digital & analog

10 Absolute times

13. Simultaneous viewing of 2, 8, 11

8. Eliminated claud 8 & 12 southward from evaluation

12. Eliminated claud 12 video

17 Review known ways of ^{meas} measurement techniques - string method, digital, etc.

18a Used wind info to general slot, if possible.

18. Did wind ones first

9. ~~Assess~~ Determination of gunshot or other event - fast use time, anal, wind

10A Determine 2 ad 11 contours except 1st slot minus on claud 2
8+12
not contour

18b Aural - real-time ad 1/2th speed

18c Video - fast use time ad echo pattern - N-wave determination

18d Physically measured with calibrated rules, protractor, various drafting equipment. Large # of location tried ad eliminated before slot located. On a 1" to 5' scale map of vicinity of Carver Court & Everett Street

18 ~~Time~~ on Video located for each gunshot by wind ^{photo blow-up} recovery ad anal analysis of real-time ~~reconstruction~~ video

plots show up. Then tried large # of points on map to find correct one.

19 - Error calculation

20. Results submitted on ~~Fig~~ 36 of the quality reported 2/21/80
" " " the other 3 " " " " 9/3/80

GREENKIL

- ① In 11/79 met with personnel of FBI, Greensboro, Greensboro PD, and ~~the~~ FBI Lab regarding what exams that could be conducted. Later met with DA Greensboro personnel.
- ② Reviewed pertinent scientific literature and other cases performed by the Signal Analysis Unit.
- ③ In early 1/80 original video tapes and film brought to Quantico and FBIHQ, and high quality audio copies with time channel produced. (8 times faster than a standard cassette)
- ④ Ran preliminary tests to determine what forensic exams could be conducted. Determined that the characteristic echo patterns were the most feasible method - triangulation eliminated due to close camera position and lack of continuity of the films (Δ - locating a ~~radio source~~ ^{radio source} by three different detection stations) (Echo thru the woods) Show waveform - Trant #25
- ⑤ Speed of sound determination - see notes (Lightning and Thunder)
- ⑥ Test slots at Quantico & FBIHQ
- ⑦

ad other FBI personnel

1. Met with FBI Greenboro / ad Greenboro PD on what, if any examinations could be conducted in 11/79 - later met with DA personnel

2. Review pertinent scientific literature

3. In early 1/80 original video tape ad film brought to ^{Quantico} FBIHQ ad I made very high quality audio tape copies.

4. Ran preliminary tests to determine what forensic exam could be conducted - determined that the use of the characteristic eels patterns was the only feasible method - triangulation eliminated due to camera positions ad lack of continuity of films.

5. Speed of sound determination

6. ~~Experiment~~ Test slots at Quantico ad FBIHQ

7. Prepared viewer copies at ≈ 25 cm/sec on a Honeywell 8106A

8. Elevated channels 8 $\frac{1}{2}$ 12 soundtracks ^{12 - matter} $\frac{1}{2}$ - all look alike

9. Determination if ground or not - just use time, anal, visual

10. Photometrics - SA

b6
b7c

12. Eliminate channel 12 video

13. Simultaneous viewing of channels 2, 8, 11

14. Measurement of eels - msec, meters, feet - digital & analog

10A Determination that 2nd ^{can} contain all the same slots except channel 2 does not contain ^{just} slot.

16. Determined Video time - using real-time ad slo-motion - not as accurate due to 1/30 second framing ad reflect delay

17. Review known methods of map measurements ^{pertinent to this exam} - string, digital

18. Started with slots seen visually ad then did slot with no known visual info

a. Visual info - not conclusive

b. Anal - real time ad 1/8th speed

c. Viewer - 500 cm/sec on Honeywell 2112 dual channel viewer

d. Physically measured with 1" to 5" mag, protractor, calibrated ruler, drafting equipment

Greensboro Damage Suit

GREENSBORO, N.C. — Three Ku Klux Klansmen and Nazis are asking \$2 million each in damages from relatives and friends of five Communist Workers Party members killed at an anti-Klan rally in 1979.

The requests came as Klansmen, Nazis and 88 local, state and federal government personnel answered a \$37 million civil rights suit filed against them a month ago by the slain Communist Workers Party members' friends and families.

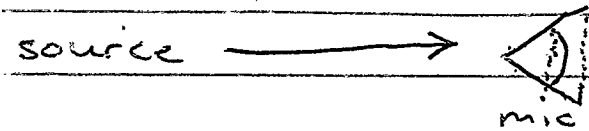
In November, six Klansmen and Nazis were acquitted of first-degree murder and felonious rioting in the shooting deaths of the five CWP members a year earlier at a "Death to the Klan" rally.

The Klansmen and Nazis contend the CWP attacked them and violated their rights to travel the public streets,

WASHINGTON POST 1/1/81

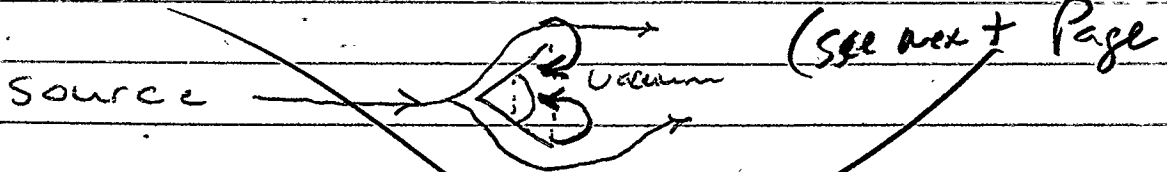
Page A 2

1
Speed of Sound thru metal ~~approx~~ ^{in excess} 4k FPS



Vibration of shock wave hitting the back of mic may cause diaphragm to push outward causing an upward spike

2



blocked by

Shock wave may be forced around a solid object creating a type of vacuum that would pull the diaphragm outward

- very short distances first wave to hit mic would be "precursor wave". Caused by air being forced out of the barrel.

- Supersonic weapon N-wave would overtake precursor wave in short time and be first wave to ~~start~~ reach mic.

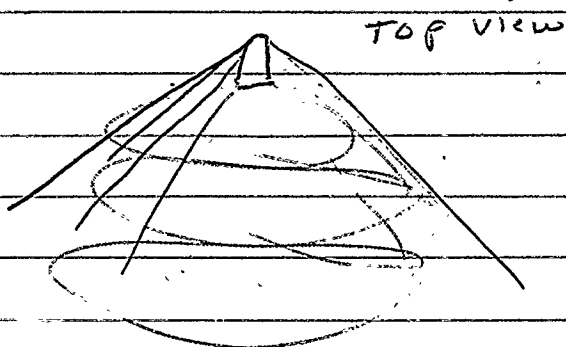
- subsonic bullets also have a supersonic wave called "whiskers" that form of the nose of projectile.



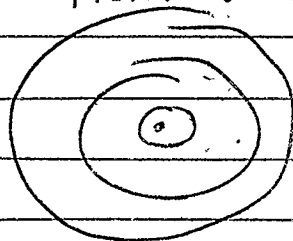
N Wave

Faster the supersonic projectile the narrower the cone.

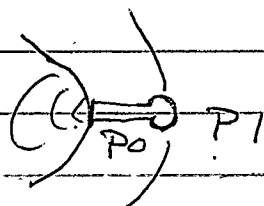
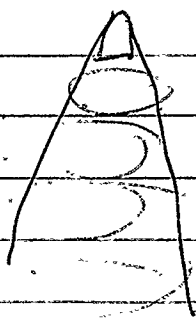
2000 FPS



Front view



3000 FPS



Theory #2

Pressure would cause diaphragm to be pushed in the typical manner.

P_1 being greater would tend to move to P_0

Transonic Zone \rightarrow .9 - 1.2 Mach
Zone between Subsonic + Supersonic

- echo of N wave may reach mic before muzzle blast or may disturb muzzle blast transient.

$$V_0 \approx 3200 \text{ ft/sec}$$

$$a = 1113 \text{ ft/sec}$$

\nearrow whiskers (small area ~~of~~ around tip of projectile that may be supersonic on even a subsonic shot

Precursor shock wave = column of air that is forced out of the barrel by the bullet.

Worksheet

Evaluation of gunshot tests at Quantico on 7/14/80

~~Test~~ Test 3 (Position 1) AR-180

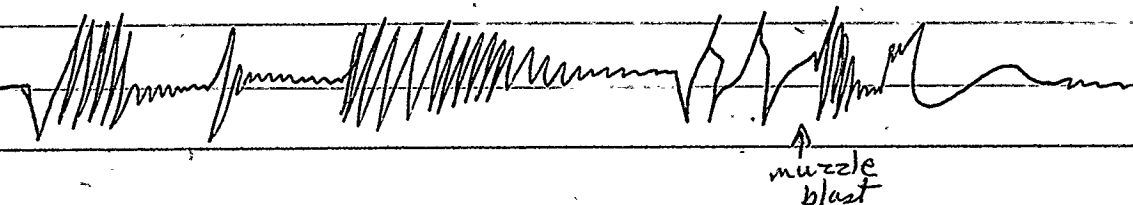
Computed: Bullet Speed $\sim 3200'$ /sec

Speed of sound $\sim 1145'$ /sec

\Rightarrow bullet should precede sound wave by .0281 sec
or 14.04 cm at 500 cm/sec

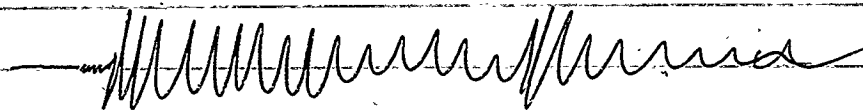
Observed: Mic toward ^{position 1} weapon

1. Muzzle blast 14.15-14.20 cm after beginning of shock wave (~~positive peak~~)
2. Shock wave starts down, muzzle blast up



^{turned} Mic away from ~~weapon~~ position 1

1. First 0.6 cm of shock wave very low amplitude
2. Cannot differentiate muzzle blast from shock wave



T3 (P1)

~~Computed~~ Bullet speed ~ 3200 /sec

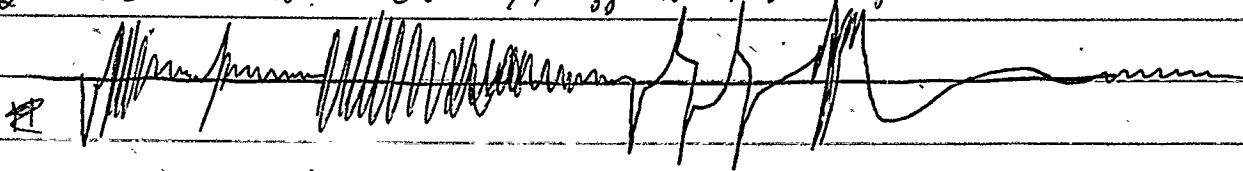
Speed of sound ~ 1145 /sec

\Rightarrow bullet should precede sound by $.0281$ second
or 14.04 cm at 500 cm/sec

Observed

Mic toward ~~the~~ muzzle blast

1. Muzzle blast 14.15 ^{14.25} cm after beginning of shock wave (Positive Peak)
2. Shock wave starts down, muzzle blast start up



Mic away from muzzle blast

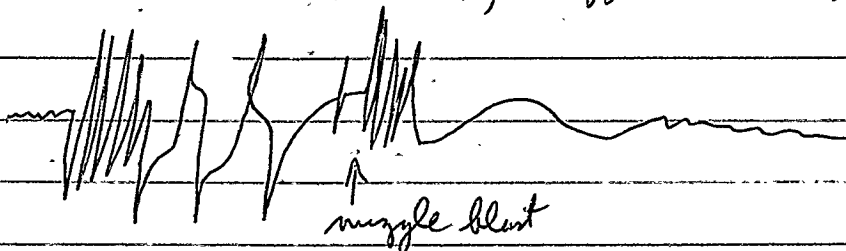
1. First 0.6 cm of shock wave very low level
2. Cannot differentiate muzzle blast from shock wave

WorksheetTest 3 (Position 2) AR-180

Computed: Probably low N-wave but rest of shock wave should be rising

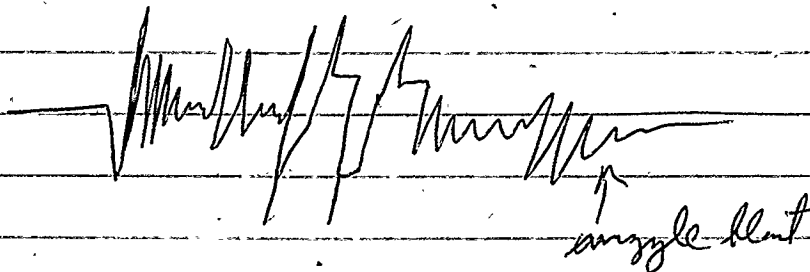
Observed: Mic toward ^{position} ~~begin~~:

1. Muzzle blast about 5 cm (.01 second) after beg of N-wave
2. N-wave low amplitude at very beg.
3. N-wave down, muzzle blast up

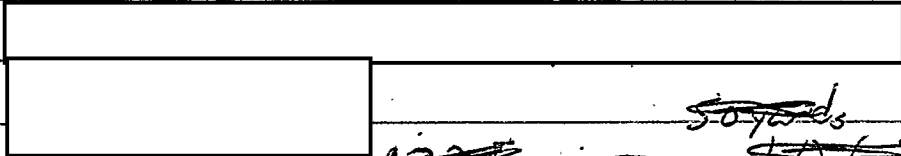


Mic ~~was~~ turned away from ^{position} ~~begin~~:

1. Cannot differentiate muzzle blast from N-wave
2. N-wave down



Firearms Instructor Quantico



b6
b7c

~~1,325~~ ~~50 yards~~ ~~1,065~~
 BB 1065 - 50 yards
 1,085 - 20 yards

12	T1	Super Sonic	1,325?	Will research
20	T2	Super Sonic	1,165?	895" 20 yards
180	T3	Super Sonic	MV 3,200	
			100 yards	2,750
	T4	Six inch barrel	MV 1,235	
			50 yards	1,104
			100 yard	1,015
	T5	4" barrel	10 Feet	912
			50 yards	870
			100 yards	840
	T6	4.5" barrel	MV 1,150	
			100 yards	970

12 gauge / 20 inch Bu 13.5 7 yard 5.8 inch
 Spread - - - 10 shots AV
 Improved 7" yard 4.8 inch
 10 shots AV

...that the company illegally refused to promote or hire women and blacks for its warehouse and trades jobs.

But on technical reasons, the appeals court threw out the charge that the firm discriminated against women and blacks for promotion, into supervisory jobs and sent the case back to Brad's court. Both sides appealed the 4th Circuit decision to the U.S. Supreme Court, which refused to hear the case.

At that point both sides agreed to the settlement.

So far, more than 200 persons have filed suits claiming that the firm discriminated against them, and others have until Sept. 15 to file their papers, a spokesman said.

Bryan has scheduled a hearing on the case for Sept. 19.

Witness Says She Saw No Guns on Klansmen, Nazis

GREENSBORO, N.C., Aug. 12 (AP) — A television reporter covering an anti-Klan rally in which five leftists were shot to death testified today that she never saw any of the defendants carrying guns.

Laura Blumenthal of WXII-TV in Winston-Salem testified as a prosecution witness at the trial of six men who are Nazis or Ku Klux Klansmen charged with first-degree murder. Five members of the Communist Workers Party were killed at the rally in Greensboro on Nov. 3.

Blumenthal, testifying for a second day, said she hid under a car during the shooting.

"You never saw any defendant with a gun?" asked Robert Cahoon, one of six defense lawyers.

"That's true," Blumenthal said.

She said she watched people fighting with sticks about 4 feet long before the shooting, but that she could not identify any of those who took part.

Earlier, Blumenthal told the jury that she saw William Sampson, 36, one of the victims, fire a shot from a pistol tossed to him by another person.

Blumenthal said she did not see who gave the gun to Sampson.

The Maryland State Lottery

Aug. 12
079

multiple injuries from the Friends and associates her as "energetic" and "c both in her work and durh several years that she work untear and board member American Civil Liberties I ter.

She resigned from the A earlier this year during a dispute over the firing of a ploye.

A 1965 graduate of Wasl High School in Arlington a ate of the University of V Steward served in the P and the Department of L earning a law degree at t town University Law Cente

She joined the chief coun of the old U.S. Department Education and Welfare in moved to the Education I after it was formed.

Education Secretary S Huftedler, in New York fo cratic National Conventio statement praising Stewa "outstanding employe and worker. We deeply regret h

700 Reported D

NEW DELHI, Aug. 12 — soon rain fell and river fl tinued today in northern I nationwide toll of flood-rel rose to at least 700, ne said.

The Corpor Invading a

MANN, 1 people she works for will caring, assistant role, rath ecutive role.

"I believe that the pro one of conviction," writes convinced that what you league, or even a boss is I will benefit you and the o should be able to exert y ease. We feel powerless, not legitimate, unknowled

Women, she says, must though it is going to thro act as assertive, as men aggressive, because men not accustomed to seeb selves. If you are submis sident, they will assume qualities, and therefore.



Three of six men charged in Klan murder trial, from left Lawrence Morgan, Jerry Smith and Roland Wood, on lunch break. Man at far right is not identified.

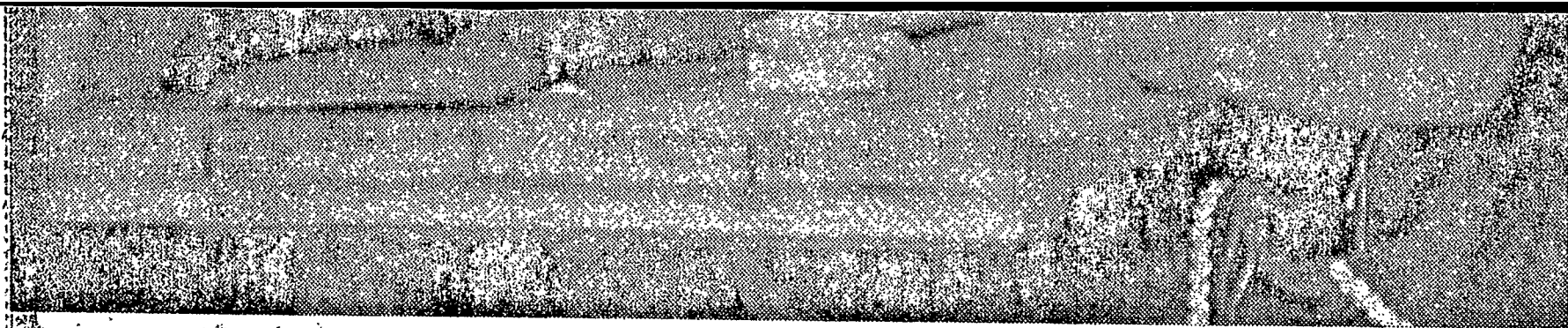
Associated Press

Klan Trial Opens to a Cry of 'Sham'

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Associated Press

Three of six men charged in Klan murder trial, from left Lawrence Morgan, Jerry Smith and Roland Wood, on lunch break. Man at far right is not identified.

Klan Trial Opens to a Cry of 'Sham'

BY Art Harris

Washington Post Staff Writer

GREENSBORO, N.C., Aug. 4

Martha Nathan, whose husband and four other Communist Workers Party members were gunned down Nov. 3 at their "Death to the Klan" rally here, jumped to her feet today as the judge instructed jurors at the opening of the murder trial to deliberate fairly and impartially.

"This trial is a sham and a farce," Nathan shouted. "The U.S. government conspired with the Nazis and the Klan to murder my husband."

As the all-white jury was hustled out of earshot, Nathan refused an order from Superior Court Judge James Monroe Long to keep quiet and was gagged and charged with contempt of court.

Asked later if she had any defense for disrupting the proceedings, she said, "My husband was murdered."

"That's no excuse," responded Long.

Nathan and Florence Cauce, whose husband also was fatally shot that November day, each were sentenced to 90 days in jail for courtroom outbursts.

The incidents inside the tense, windowless courtroom—about two miles

for the site of the shooting and around the corner from a movie theater showing "Revenge of the Patriots"—underscored one fact that the defense and prosecution agreed upon at the outset: This is a politically loaded trial.

Four avowed Klansmen and two Nazis are each charged with five counts of first-degree murder and one count of felonious rioting. In an upcoming trial, five CWP members are charged with rioting.

If the Nazis and Klansmen go free and the communists to jail, it would lend a flavor of self-fulfilling prophecy to the rhetoric fired here today by the communists.

The outcome depends on the jurors' ability to divorce themselves from their feelings about the extremist politics of both sides.

"You are not here to choose between competing ideologies, but to determine if the defendants are guilty of the crimes for which they are indicted," Long said as Nathan, and then Cauce, interrupted the proceedings.

While Greensboro police SWAT teams patrolled the courthouse roof today, the communists engaged in mild guerrilla warfare inside, setting off a false fire alarm, unleashing a stink bomb in the court and vowing

to ignore any subpoenas to testify.

The general facts of the case are not likely to be disputed.

There were many eyewitnesses—including television reporters and print journalists—at the rally scene, a dingy black public housing project where the Nazi-Klan caravan rolled to a halt, shooting broke out and five communists died.

What attorneys disputed today in their opening statements was who had attacked whom.

Assistant District Attorney Jim Coman said the prosecution would prove that the six defendants had set out to murder the communists in cold blood, rather than merely to disrupt the anti-Klan rally.

There were weapons in the van driven by Klansman Lawrence Gene Morgan, 27, a Lincolnton, N.C., machine operator, and in the car driven by Nazi Jack Wilson Fowler, 28, a Winston-Salem laborer. Coman said pointing at two of the six defendants.

"The defendants went there for the sole purpose of disrupting the rally, prepared to do everything from throw eggs to shoot to kill," said Coman. "If their only reason was to protest what the CWP had to say, why did they have to come armed to the teeth?"

But attorney Robert Cahoon, who is

defending Nazi Roland Wayne Wood, 35, argued that the events of Nov. 3 "did not occur in a vacuum," that the seeds had been planted at an earlier Klan rally in China Grove, N.C., that the communists had disrupted. Later, Cahoon said, the communists taunted the Klansmen, calling them "scum and cowards" and daring them to appear at the Nov. 3 "Death to the Klan" rally.

Moreover, the KKK-Nazi caravan was lured into a well-planned ambush, characterized by gunfire from rooftops and trees that forced its members to return heavy fire in self-defense, attorneys for the defendants argued.

Also on trial for murder are Klansmen Jerry Paul Smith, 32, a self-employed logger from the Lincolnton area; David Wayne Matthews, 24, of nearby Newton, N.C., who is recovering from heart surgery, and Colman Blair (Johnny) Primmore, 37, a Lincolnton textile worker.

All the defendants are high school dropouts whose lives revolved around blue-collar frustration, earning little more than the minimum wage.

The slain communists were well-educated, college graduates like Michael Nathan, 32, a doctor devoted to radical political causes who never left behind his protest days at Duke University.

Greensboro detective J. H. (Rooster) Cooper, who followed the KKK-Nazi caravan to the shooting site, testified today that he saw Jack Fowler raise a semi-automatic rifle and fire in the direction of several of the victims. J.

Swastika Mars Federal Official's Lawn

By Sandra G. Goodman

Washington Post Staff Writer

The incident coincided with the opening yesterday in Greensboro, N.C., of

defendants at his home. A bureau spokesman declined to comment on the

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Greensboro detective J. H. (Rooster) Cooper, who followed the KKK-Nazi caravan to the shooting site, testified today that he saw Jack Fowler raise a semi-automatic rifle and fire in the direction of several of the victims. J. T. Matthews, a local police photographer who accompanied Cooper that day, corroborated most of Cooper's testimony and identified David Wayne Matthews as the man he saw pumping rifle fire into a crowd.

The Greensboro police were criticized for arriving late at the demonstration scene and allowing the fatal shooting to occur.

"Some of the things you will hear won't be flattering to the state of North Carolina," said Assistant District Attorney Coman, apparently referring, in addition, to recent disclosures that a federal agent infiltrated the Nazis and allegedly urged them to commit illegal acts, including carrying weapons to the Nov. 13 rally.

Swastika Mars Federal Official's Lawn

By Sandra G. Boodman
Washington Post Staff Writer

A large swastika was burned into the lawn of the Northern Virginia home of the director of the Federal Bureau of Alcohol, Tobacco and Firearms and a lifesize hooded effigy was found yesterday morning hanging from a nearby tree.

Bureau director Glenn R. Dickerson, 53, and his wife Mary were not at their McLean home at the time of the 4 a.m. incident, which is under investigation by the Fairfax County police.

Shortly after the incident a woman telephoned The Associated Press in Washington and said that the Communist Workers Party was responsible for the act. The woman did not identify herself nor disclose a motive.

The incident coincided with the opening yesterday in Greensboro, N.C., of testimony in the trial of six Nazi Party and Ku Klux Klan members charged with killing five members of the Communist Workers Party at a bloody anti-Klan rally last Nov. 3.

Earlier this month a Greensboro newspaper disclosed that an undercover agent of Dickerson's bureau had infiltrated the Nazi Party and knew in advance of the caravan by the Klan that culminated in the shootings. The agent, Bernard Rutkovich, apparently failed to inform federal or local law enforcement officials of the caravan, although there is no indication that he knew in advance that violence would erupt.

Dickerson could not be reached for comment yesterday on the inci-

dents at his home. A bureau spokesman declined to comment on the bizarre incident, saying he feared it might jeopardize the Greensboro trial.

Two bureau agents have been assigned to guard Dickerson's ranch-style home in the Franklin Forest section of McLean, a wooded neighborhood of \$200,000 homes.

Police said yesterday that the flaming swastika and the effigy, which bore a red dot in the center of its forehead, apparently signifying a bullet hole, was discovered by a neighbor who called police.

The neighbor, who was not identified, reported seeing three persons get out of a car, ignite the lawn with gasoline, string up the effigy and flee.

Rolivia Accuses U.S. of Violations in Cabina Negro

Recorded
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FEDERAL BUREAU OF INVESTIGATION
UNITED STATES DEPARTMENT OF JUSTICE

Laboratory Work Sheet

To: SAC, Charlotte (44-3527)

FBI FILE NO.

LAB. NO. 91109083 E RD QZ

Re: GREENKIL

YOUR NO.

Examination by:

[Redacted box]

FIREARMS

b6
b7C

Examination requested by: SAC, Charlotte

Reference: Letter dated 11/6/79

Examination requested: Video tape - Signal Analysis - Firearms

Specimens received: 11/8/79, personally delivered by SA [Redacted box],
Charlotte

Q1 Video cassette tape labeled Sony KCA60

ALSO SUBMITTED:

One aerial photographic map

Justice in the Streets: A Victory for Lunacy

COHEN, From B1

what happened in Greensboro is a total victory for all three, and a complete wipeout for the rest of us.

But what really happened in Greensboro is something we may never know. There is a witness who said that the Klan-Nazis started things off by shooting. There is yet another witness who said the Communists started things when one of their number pounded on the hood of a Klan car — clearly a capital offense. The jury, meeting for seven weeks and deliberating for seven days, agreed with the Klan and the Nazis — they had fired back in self-defense.

All we really know for sure is that five people were killed and that two opposing groups decided to fight it out in the streets. They came to Greensboro to rumble. They came with clubs and fists and with guns. People were killed and yet it turns out somehow that no law was broken. No one is guilty. No one goes to jail. No one pays a fine. Five people lie dead and it is neither murder nor manslaughter nor assault nor, up to this moment, a violation of anyone's civil rights.

It's preposterous. In this country, political disputes are not settled in the streets with guns. It is not done. It is not allowed. It is forbidden. That's the sort of thing that happened in Germany before Hitler and in other countries where people gave up on the ballot and took their grievances into the streets.

It would be melodramatic at best to compare Weimar Germany with what happened in Greensboro, but it would be just plain wrong, not to mention foolish, to ignore the incident just because those involved occupy the nut house of American politics. At the very least, the Justice Department ought to seek indictments for violations of civil rights. At the very least, the state of North Carolina ought to consider how it is that two groups used Greensboro the way cats use an alley and no one gets so much as a ticket. And we all ought bite our tongues before dismissing the fears of blacks that America is rethinking its commitment to civil rights. Events lately have not been reassuring.

The issue, after all, is not that mess we started with — Klansmen, Nazis and Communists. The issue is not even some sort of preconceived notion that the dead have to be innocent and the living guilty. The issue, plain and simple, is that if two groups brawl in the streets and five people are killed and absolutely no one is convicted of anything, then that unholy mess of Klansmen, Communists and Nazis are not lunatics at all. Instead, they share a chillingly accurate view of American society — justice is what you get with a gun.

IT IS AN UNHOLY MESS we have to deal with today — The Ku Klux Klan, the Nazi Party of the United States and the Communist Party of the United States. They all came together more than a year ago in Greensboro, N.C., for a brawl and when it was over, five Communists were dead and six Klansmen and Nazis arrested. Now the Klan and Nazi members are free. The Communists, of course, are still dead.

In a way, everyone seems to have gotten what they wanted from the incident and the subsequent trial. The Communists, including two widows of the slain men, boycotted the trial, refusing even to testify. They denounced the whole affair as a sham, predicted that the Klansmen and Nazis would be exonerated and had all their predictions fulfilled. They have more than martyrs now. They have proof that the system works the way they say it does — almost not at all.

As for the other side, they, too, got something out of the trial. They can now claim, as they had all along, that they stood up for the rights of white peo-

RICHARD COHEN

Justice in the Streets: A Victory for Lunacy

ple, that they did battle with that most evil of all institutions, the Communist Party, and emerged triumphant. Feeling *that* good must take the edge off hating.

I could not blame you if you took a pox-on-both-their-houses attitude and turned directly to the funnies. There is very little here that is uplifting or has much to do with the way most Americans lead their lives. The people involved are strange or hard to understand — perched way out there on the lunatic right or the lunatic left of American politics. What the three groups had in common was almost total irrelevance to the political process and a willingness to settle their differences violently. In that sense,

See COHEN, B9, Col. 1

F.B.I. Agent Says Shots Were Fired at Klan Members

Special to The New York Times

GREENSBORO, N.C., Sept. 24 — Jurors in the trial of six men accused in the murders of five members of the Communist Workers Party at an anti-Ku Klux Klan rally encountered an apparent contradiction today involving videotapes of the Nov. 3, 1979, shootings: While the recorded sights appear to incriminate the defendants, the recorded sounds, according to expert testimony, indicate that the defendants were not responsible for a number of the shots fired.

Percy Wall, one of six court-appointed defense attorneys, told the all-white jury that about half of 39 shots recorded in an 88-second period were fired by members of the Communist group.

In his opening remarks, Mr. Wall asserted that what happened away from the cameras, but within range of the built-in microphones, would demonstrate that the defendants, all members of the Klan, "returned the fire of the Communists in defense of themselves."

Mr. Wall, who represents David Wayne

Matthews, called as his first witness a specialist in audio ballistics analysis for the Federal Bureau of Investigation, who explained the results of 10 months of tests at the bureau's laboratory in Washington.

Seeks Origin of Shots

Bruce Koenig, a special agent supervisor in the bureau's technical services division, said that he used the tape and still photographs of the incident to pinpoint the order and the origin of the shots. Mr. Koenig said most of the shots had

FRSDAY, SEPTEMBER 25, 1980

been recorded fully enough to make an analysis of them nearly 100 percent accurate, with only a marginal possibility of error. Mr. Koenig said, however, that he could not identify the location of several of the shots recorded. He also said that fewer shots were recorded than the number of spent shells recovered by the police at the scene.

Under direct examination by Mr. Wall, Mr. Koenig identified about 12 shots fired by persons the prosecution and defense both believe to be members of the Communist Workers Party. The agent also identified Mr. Matthews, Mr. Wall's client, among those firing shots.

Mr. Matthews and the other five defendants face five counts of first degree

murder, a capital offense, and one count of engaging in a riot.

The F.B.I. study was initially requested by the prosecution. The defense was allowed to introduce the audio analysis in court under an agreement whereby the jury was permitted to consider the videotapes, which are not normally allowed as evidence in North Carolina Courts.

Rick Greeson, an Assistant District Attorney, was restrained in his cross-examination of Mr. Koenig. The prosecution is expected to rely on the same study in the forthcoming trial of six surviving members of the Communist Workers Party who are also charged with engaging in a riot on Nov. 3.

44-81521

GREENSBORO

DAILY NEWS

Since July 18, 1909

GREENSBORO, N.C., THURSDAY MORNING, SEPTEMBER 25, 1980

Expert Testifies On Shots' Origin

BY STEVE BERRY
Daily News Staff Writer

At least a third of the gunshots fired at the "Death to the Klan" rally Nov. 3 came from where Communist Workers Party members were located, a defense witness testified Wednesday in Superior Court.

Bruce Koenig, a Federal Bureau of Investigation audio expert, for the first time identified a third person who fired a weapon from where the CWP demonstrators were gathered. He said a woman, who defendants say was a communist, was wearing a yellow raincoat and firing a pistol from the west side of Carver Drive toward the Klan.

Previously, testimony indicated gunfire from the Communists came from CWP victim Bill Sampson, who fired a shot as he fell dead, and Rand Manzella. Police found Manzella carrying a .38 caliber pistol containing six spent shells when he was arrested after the shooting.

The next to the last of 39 shots

in the 88-second gun battle with the Ku Klux Klan and Nazis came from the south side of Everitt Street, Koenig said.

Several prosecution witnesses said they saw a white man in that area try to fire a derringer at the Klan. But they said the gun misfired each time. However, police later found one live and one spent shell in the derringer.

Eight other shots came from near a WXII-TV news car on the opposite side of Carver Street from where the woman in the yellow raincoat was shooting.

When the gunfire ended, five CWP members were dead.

Although Koenig's testimony about those 14 shots bolstered the self-defense claims of the defendants, he said the first shot came from one of the cars in the nine-vehicle caravan that brought the six defendants and about 30 other Klansmen and Nazis to the anti-Klan rally. His testimony also raised questions about defense lawyer Percy Wall's opening argu-

44-81521

Audio Analysis: Shots

Came From CWP Area

From A-1

ment Wednesday that 17 to 19 of 39 shots came from Communists.

Wall argued that the Communists fired the four shots which followed the first one, but Koenig's testimony didn't clearly determine which side fired them.

Wednesday was the first time the defense has presented testimony. Earlier, the prosecution presented its case — calling 97 witnesses over a seven-week period.

Through it all, most of the defendants remained confident of acquittal, judging from interviews Wednesday.

Nazi defendant Jack Fowler Jr., 28, of Winston-Salem, said God told him during a religious vision he had while in jail that he and his co-defendants would be acquitted.

He said the vision came to him on Jan. 12 at 1:45 p.m., and from that day on he has considered himself a born-again Christian. "I'm not worried about a thing," he said.

Klan defendant Jerry Smith, 33, of Maiden, and Coleman Pridmore, 37, of Lincolnton, said they still are confident of acquittal and are optimistic now that the prosecution has completed its case.

The other three defendants are Roland Wood, 35, of Winston-Salem; Lawrence Morgan, 28, of Lincolnton; and David Matthews, 25, of Newton. Each is charged with five counts of murder and one of felonious rioting.

They say they were lured into an ambush and that when the six defendants saw the communists hitting the cars in front of them with sticks, they got out of their vehicles and raced to the aid of their fellow Nazis and Klansmen.

Not until they heard gunfire, Wall argued in his opening statement to the jury, did the defendants run back to their car to get weapons.

He said they had no intention of get-

ting in a fight before the gunfire started. He said they merely planned to throw eggs and heckle the CWP.

The prosecution says the six defendants should be convicted of first-degree murder, which brings a life sentence or the death penalty, because the five communists were killed while the defendants were rioting.

The prosecution originally planned to use Koenig as a witness. He was never called to testify, however, and no explanation was given. Even so, he is undergoing a long, but friendly cross-examination by Assistant District Attorney Rick Greeson. Greeson has led him through the slow-motion videotapes of the shooting scene recorded by cameramen from WTVD-TV of Durham and WFMY-TV of Greensboro who were assigned to cover the march.

Greeson is stopping the slow-motion pictures as each of the 39 shots is fired so Koenig can explain the scene and locate the shot on television screens and on the scale drawing. He is able to do this because of his analysis of the sound tracks of the videotapes.

Koenig's testimony showed that within 20 seconds after the first shot was fired, the defendants were in a stick fight with the communists. That fight was in progress when the second shot was fired. It came 22 seconds after the first.

That shot apparently was a shotgun blast, because a spent shell was found near the left lane curb where Koenig traced the shot. His testimony didn't identify which side fired it or the next three.

Those three shots came from somewhere in a wide area covering both sides of Carver at the intersection with Everitt. That is the middle ground between the Klan and Nazis and the communists.

Koenig's testimony attributed four shots to defendant Wood, four to Fowler, one to Matthews, and two to Smith.

Half of the 14 shots attributed to the communists were among the last 10 shots in the gunbattle.

The Greensboro

Record

Thursday, September 25, 1980.

**Shots-sound testimony
may not have precedent**

44-81521

BY RICK STEWART
Record Staff Writer

An FBI audio expert continued his testimony this morning in the murder trial of six Ku Klux Klansmen and Nazis and may be creating "new law" in North Carolina with his testimony.

Special Agent Bruce Koenig is testifying that through analysis of videotapes made by television newsmen on the morning of Nov. 3 he can reconstruct where each of the 39 shots fired that morning originated.

Wake Forest University Law Professor James Sizemore said in an interview that Koenig's testimony may be unique in the state. He explained that new law means that such testimony and illustrations are the first that have been entered as substantive evidence in a trial.

Defense lawyer Percy Wall, who called Koenig as the defense's first witness, said he thinks this is the first such testimony used in the state. He added that during his research for the trial he could find no other evidence of this kind.

Superior Court Judge James M. Long allowed Koenig's testimony when defense and prosecution lawyers agreed to let it be entered uncontested. Sizemore said it is unlikely an appellate court would rule the evidence inadmissible if both sides agreed to allow it into evidence.

The trial also created new law when Long allowed the videotapes to be introduced as substantive evidence. Sizemore said he has heard of several trials where the judge allowed a photograph to be entered as substantive evidence but said he is not aware, prior to this trial, that a videotape has been allowed into evidence. He explained that by allowing something in as substantive evidence the jury may consider everything they see. Other judges have allowed pictures and videotapes in as illustrative evidence but always instruct jurors they must consider only what they see that illustrates the testimony of a witness.

His testimony showed that the first shot was likely fired from one of the Klan caravan vehicles as it made its way past the staging area for a Communist Worker's Party "death to the Klan" rally.

In his testimony, Koenig is often pointing out on the slow motion videotape who likely fired the shots heard on the tapes.

In some cases, he said it is impossible to determine. But on others he said he can definitely determine who fired the shots. Defense lawyer Wall said Wednesday in his opening statement to jurors that the defense would show that perhaps 17, 19 or more of the 39 shots were fired by the CWP.

Koenig testified that he cannot tell exactly where shots 3, 4, and 5 originated. He said the sound waves are not sufficient for him to pinpoint the origins.

Koenig admitted during recess this morning it is unusual to have videotapes available to help analyze multiple gun shots. He said this is the first time he is aware that such evidence has been used in a trial.

In his testimony this morning, Koenig explained that determining where each shot originated by listening to portions of the videotapes is "slow, tedious" and requires "exacting physics."

He explained that for each second of sound on the audio, he made 200 inches of sound waves. He said he then matched the sound waves, including echo sound waves, with where they could have originated at the scene. "That's why it took us from November to the first of this month to do it," he explained to jurors. "We had to plot every sound and every echo." During the first hour of his testimony this morning, Koenig showed by using videotapes and a map where each shot originated. He was doing the same thing Wednesday afternoon, but court was recessed to give the videotape player time to cool.

WINSTON-SALEM JOURNAL

City Edition

THURSDAY, SEPTEMBER 25, 1980

Key Defense Witness's Testimony Helps State's Case

FBI Agent Pinpoints Gunshots

By Michael P. Massoglia
Staff Reporter

GREENSBORO — Defense attorneys in the murder trial of six Ku Klux Klansmen and Nazis called their first witness yesterday, but most of his testimony came during cross examination and helped the state with its case.

Under direct examination, Bruce E. Koenig of the FBI testified that his analyses of television videotapes showed that 17 of the 39 shots fired at the anti-Klan rally here last Nov. 3 came from where Communist demonstrators were.

That testimony was significant for defense attorneys who have argued that their clients acted in self-defense in the shooting deaths of five Communist Workers Party members.

But under cross-examination, Koenig was able to narrate slow-motion videotapes of the rally that showed several defendants shooting guns and advancing

toward a group of anti-Klan demonstrators.

In order for a killing to be done in lawful self-defense, a defendant must be without blame in initiating the affray and must try to retreat, according to state law.

Jurors in Guilford Superior Court had seen the slow-

motion tapes before the state rested its case last week, but yesterday they were able to hear Koenig describe individuals shooting guns.

"He's just fired now," said Koenig, pointing to a man an earlier witness had identified as Jerry Paul Smith of Maiden. "You can actually see smoke from his gun."

Besides Smith, Koenig described and pointed out on a television monitor three others shooting at the rally. Based on descriptions given earlier, they were Jack Wilson Fowler Jr. and Roland Wayne Wood, both of Winston-Salem, and David Wayne Matthews of Newton.

Also being tried on charges

of first-degree murder and felonious rioting are Lawrence Gene Morgan, and Coleman Blair Pridmore, both of Lincolnton.

Koenig's testimony showed that about 40 percent of the gunfire came from anti-Klan demonstrators. Although Koenig indicated that the first two shots came from the front

of a caravan of Klansmen and Nazis, the defense contended that the next three shots came from demonstrators.

"The evidence will show that these shots were fired by Communists at members of the KKK," said Matthews' attorney, Percy Wall, during his opening argument yesterday. "They (the

defendants) returned fire in defense of themselves."

Koenig said that he could not pinpoint the location of the third, fourth and fifth shots at the rally, except to say that they were fired in a broad area that included the intersection and places where demonstrators had been seen.

The locations of the other 36

shots at the rally, Koenig said, could be pinpointed to within several feet. The defense put a clear, plastic overlay on a four-by-eight wall diagram of the neighborhood, and Koenig put a red circle where he said the shots had come from.

The state will resume its cross-examination when court reconvenes this morning.

44-81521

Court to Hear Final Pleas In Klan Trial

GREENSBORO, N.C. (UPI) — After four months and 125 witnesses, closing arguments begin tomorrow in the trial of six Klansmen and Nazis accused of killing five communists.

The closing arguments are expected to last about a week, with jury deliberations beginning almost a year after the Nov. 3, 1979, shooting that erupted just before a "Death to the Klan" march sponsored by the Communist Workers Party.

Defendants David Wayne Matthews, Jerry Paul Smith, Lawrence Gene Morgan, Roland Wayne Wood, Jack Wilson Fowler Jr. and Coleman Blair Pridmore could be sent to the gas chamber if convicted on first-degree murder charges. Eight other Klansmen are scheduled to be tried later.

Jury selection began June 16, and it took prosecutors and the six court-appointed defense attorneys seven weeks to select the six men, six women all-white jury.

Until last week, defense attorneys maintained the communists fired first and the Klansmen and Nazis only returned fire in self-defense. But Wednesday, defense attorney Robert Cahoon said it really does not matter who fired first.

The change in defense tactics came after prosecutors linked the first two shots heard on videotapes of the shooting to two Klansmen to be tried later. Cahoon maintains those shots were fired in the air as Klansmen attempted to scare a communist mob attacking their cars.

He claims the first shots fired at anyone were fired by communists.

"It makes no difference who fired the first shot," Cahoon said. "Those shots were not fired in anger at all."

The videotapes, made by television news crews, are a key part of the prosecution case. In slow-motion, some of the defendants can be seen with weapons and one — Smith — is seen running down a sidewalk firing a pistol at one of the communists who was killed.

Smith claims he was hit on the head by a communist earlier and does not remember firing the shots.

Despite the violence depicted on the videotapes, the defense is expected to argue next week that the actions on the film are only in reaction to violence by the communists that was not filmed.

STAR 10/26/80

F.B.I. Agent Says Shots Were Fired at Klan Members

Special to The New York Times

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Bruce Koenig, a special agent supervisor in the bureau's technical services division, said that he used the tape and still photographs of the incident to pinpoint the order and the origin of the shots. Mr. Koenig said most of the shots had

been recorded fully enough to make an analysis of them nearly 100 percent accurate, with only a marginal possibility of error. Mr. Koenig said, however, that he could not identify the location of several of the shots recorded. He also said that fewer shots were recorded than the number of spent shells recovered by the police at the scene.

Under direct examination by Mr. Wall, Mr. Koenig identified about 12 shots fired by persons the prosecution and defense both believe to be members of the Communist Workers Party. The agent also identified Mr. Matthews, Mr. Wall's client, among those firing shots.

Mr. Matthews and the other five defendants face five counts of first degree

murder, a capital offense, and one count of engaging in a riot.

The F.B.I. study was initially requested by the prosecution. The defense was allowed to introduce the audio analysis in court under an agreement whereby the jury was permitted to consider the videotapes, which are not normally allowed as evidence in North Carolina Courts.

Rick Greeson, an Assistant District Attorney, was restrained in his cross-examination of Mr. Koenig. The prosecution is expected to rely on the same study in the forthcoming trial of six surviving members of the Communist Workers Party who are also charged with engaging in a riot on Nov. 3.

THE NEW YORK TIMES, THURSDAY, SEPTEMBER 25, 1980

ork Times

in 1851

ublisher 1896-1935

ER, Publisher 1935-1961

ublisher 1961-1968

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Letters

U.S. Spur to the Arms Race

To the Editor:

Suppose we were to read one morning in *The Times* that the Soviet Union had yesterday announced decisions to:

- Abrogate an unofficial, but *de facto*, moratorium of more than 10 years' standing on development or deployment of any new systems of chemical warfare.

- Take positive steps toward the in-



A Peculiar Tale Of 2 Hospitals

To the Editor:

Racist or not, it shows a lack of sensitivity among our political leaders when the State of New York is opening a \$1,000-a-day-per-bed hospital in Stony Brook, L.I., an area where it is not needed, and the City of New York is closing a hospital in Manhattan's Harlem community center.

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See BOMBERS, A10, Col. 1

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Second Acquittal Of Klansmen, Nazis Revives Bitterness

By Rick Atkinson
Washington Post Staff Writer

GREENSBORO, N.C., April 16—It lasted only 88 seconds, a brief but furious fusillade of 38 gunshots that left five dead, seven wounded and this city's reputation sullied.

Today, nearly five years later, the bitterness and recriminations that followed the shootings flared anew in the wake of the acquittal Sunday by an all-white jury of six Ku Klux Klansmen and three American Nazi Party members charged with civil rights violations. The verdict ended any chance of criminal punishment for those involved in the disruption of a Nov. 3, 1979, anti-Klan rally that triggered the shootout.

"I found the verdict sickening," said Signe Waller, widow of shooting victim James C. Waller, who had been a textile plant organizer and a member of the Communist Workers Party. "I think it is very dangerous for the American people . . . It begins a process of legitimately killing people for their political views."

See GREENSBORO, A6, Col. 1

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2nd Acquittal of Klansmen, Nazis Reopens Wounds

GREENSBORO, From A1

The acquittal in U.S. District Court in nearby Winston-Salem was the second in four years for many of the nine defendants. Five had been acquitted, also by an all-white jury, in a state court in 1980 of charges of murder and rioting.

Today, a dozen protesters outside the federal courthouse here held placards denouncing the verdict, but police said there was no repeat of the isolated violence that followed the 1980 acquittals.

As the legal battleground shifts to the civil courts and a \$48 million federal lawsuit filed by survivors of the shooting victims, city officials here said they hoped that some of the notoriety would fade from the Klan-Nazi-communist clash.

"It's something that has been mentioned by a few [businesses] making decisions about locating here," said Tom Stapleton, acting president of the Greensboro Chamber of Commerce. "The incident in question could have happened virtually any place . . . It's something where we've just got to look forward and not look back."

But Lewis Pitts, attorney for the Greensboro Civil Rights Fund, which has filed the civil suit, said, "The mayor and the Chamber of Commerce keep saying, 'Let's put this behind us. Good grief, let's not air this whole thing' . . . But right now it's going to remain a black eye for Greensboro because this is the place where people were killed on TV in broad daylight and no one was punished for it."

The verdict baffled and enraged some of the victims' relatives who pointed to FBI evidence that the Klan and Nazis fired the first 11 shots, killing and wounding six people before the first communist returned fire. Four television cameramen filmed portions of the gun battle. The videotape showed such scenes as a Klansman

sprinting down the street, firing a .357 magnum pistol at victim Cesar V. Cauce.

Federal prosecutors had evidence that had not been available in the 1980 murder trial, including help from Communist Workers Party members, who boycotted the state trial, and testimony from unindicted Klansmen.

One of the nine court-appointed defense attorneys suggested that the jury may have been overwhelmed by the barrage of technical testimony and rebuttal, which included detailed analysis of sound and echo patterns on the videotapes and evidence linking metal fragments in the victims to the guns and ammunition used by specific defendants.

But Pitts argued that the "whole prosecution was skewed" by an indictment which forced the government to prove that the Klansmen and Nazis were racially motivated in their attempts to break up the rally. The defendants argued that they were motivated by anti-communist patriotism, not racism, and had fired only after their nine-vehicle caravan was attacked.

Kenneth W. McAllister, the U.S. attorney in Greensboro, said the federal statute used in the 14-count indictment required proof of racial intent. "You can't rewrite the statute to fit the setting," he said.

Pitts also assailed the all-white juries in both criminal cases as "reflecting the systematic exclusion of black people from the political process, specifically the jury system." The district from which the federal jury was selected is about 25 percent black, he added.

Despite 120 witnesses and hundreds of exhibits, the three-month federal trial failed to answer several questions that undoubtedly will surface again in the civil suit now scheduled to begin in August. The suit argues that federal, state and

local officials had conspired with the Klan and Nazis to violate the rights of those killed in the rally.

For example, one of the defendants, Edward W. Dawson, 65, a carpentry contractor, reportedly worked as an FBI informer on the Klan until 1977 and was an informer for the Greensboro police in 1979. Dawson, who led the Klan-Nazi caravan, was acquitted of conspiring to disrupt the rally and of trying to hamper a federal investigation into the shootings. He argued that his actions were part of his work as an informer, but it is unclear how extensively he was serving law enforcement agencies.

The shooting site, on a scruffy eastside street corner in a neighborhood called Morningside Homes, is now as famous in its own right as the F.W. Woolworths luncheon counter here where blacks in 1960 staged the first sit-in protest of segregation.

There is no monument today at the intersection of Evritt Street and Carver Drive, no marker, not many memories judging from the two teenagers dribbling a basketball who merely shrugged when asked about the Klan shootout.

Fred R. Harwell Jr., attorney for Virgil L. Griffin, a defendant who serves as grand dragon of the state chapter of the Klan's Invisible Empire Knights, argued that the acquittal confirmed the "freedom of the individual like Virgil Griffin to say what he wants to say whether or not you like what he wants to say.

"The issue of free speech and free thought were at play in this case," Harwell added. "The verdict was a very positive one, rather than a negative one.

Griffin will celebrate his acquittal, Harwell said, by attending a Ku Klux Klan rally in Louisburg Saturday.

Nine Men Are Found Not Guilty In Incident at Anti-Klan Parade

KLAN, From A1

one count that charged Griffin and Dawson with conspiring to prevent witnesses from talking to federal agents.

"We're obviously deeply disappointed and disagree with the verdict," said U.S. Justice Department attorney Daniel Bell. "In our system of justice, the jury has the responsibility for the final say."

Griffin's attorney, Fred Harwell, wiped his eyes with a handkerchief and said he felt "wonderful."

Griffin said he planned a Klan meeting in Louisburg next Saturday night to celebrate. "I'll have three beers tonight," he said.

Dawson expressed his relief. "I was down bad. I'm coming up now,"

he said. "Praise the Lord," Fowler said.

"Thank God for honest people," Matthews said. "They saw us through all this."

"I feel terrible," Dale Sampson said. "The man who murdered my husband is now walking the streets." She said the acquittals would make survivors "fight even harder" in their \$48 million civil suit against the defendants, the FBI and Greensboro police.

The Greensboro Civil Rights Fund, which filed the suit on behalf of the survivors, contends that government officials helped plan the confrontation.

Fund attorney Lewis Pitts said the indictment provided a "loophole"

for the defendants because it required that the government prove beyond reasonable doubt that the Klansmen and Nazis would not have come to the rally without racial motivation. "Within the skewed indictment, the three prosecuting attorneys did a vigorous job of pursuing the case," he said.

During the trial, Bell said evidence showed that the defendants "had an unspoken but clear, common understanding that they would provoke a fight to give them the excuse to disrupt the parade."

But Jim Cooley, a lawyer for Matthews, said his client fired "at people with guns pointed at him . . . God knows he didn't go there to kill anybody."

Islanders Beat Capitals to Lead Series, Two Games to One—C1

The Washington Post

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Federal Diary	D 2	Style Plus	B 5
Metro	D 1	Television	B10
Inside: Washington Business			

Weather

Today—Variable cloudiness with a 30 percent chance of rain, high near 60, low 43-46. Southwesterly winds 10 to 15 mph. Tuesday—Variable cloudiness, 30 percent chance of rain. Yesterday—Temp. range: 59-48. Details on Page D2.

107th Year ... No. 133

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MONDAY, APRIL 16, 1984

Higher in Areas Approximately 75 Miles From District of Columbia (See Box on A2)

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American, Frenchman Are Freed

Beirut Shiite Force Rescues Captives Held Two Months

By Herbert H. Denton
Washington Post Foreign Service

BEIRUT, April 15—Shiite Moslem militiamen today rescued an American professor and a French architect who had been held captive since being kidnaped in west Beirut two months ago. The release came as gun battles in Tripoli between pro- and anti-Syrian militias reportedly killed seven people and wounded 35.

The two men, Frank Regier, 50, head of the electrical engineering department at the American University of Beirut, and Christian Joubert, 36, an engineer and housing specialist, were presented by Shiite militia leader Nabih Berri at a press conference at his home that was attended by U.S. Ambassador Reginald Bartholomew.

Berri, who was guarded in discussing the release, would not identify the kidnapers or discuss their motives and would not say whether forcé had been used. He said a tip led his militiamen to the house where Regier and Joubert were being held, but he did not say where it was.

The Los Angeles Times reported that Berri said the kidnapers were members of a fundamentalist Islamic sect but would not further identify it. Beirut state radio said militiamen



Jesse L. Jackson, left, and D.C. Del. Walter E. Fauntroy cheer the appearance of the Staple Singers at Convention Center.

Jackson Cites Impact of Candidacy

By Eric Pianin
Washington Post Staff Writer

Jesse L. Jackson, in his first major speech in the District since launching his presidential campaign, said yesterday that even though he may not win the Democratic Party nomination, his candidacy has pushed the party in a

Congress," Jackson told a massive turnout of largely black supporters at the D.C. Convention Center. "It will never be the same again."

Billed as a Palm Sunday "Explosion of Gospel Music," the fund-raising event came on the heels of Jackson's first clear-cut primary victory Saturday at the South Carolina Democratic state convention

delegates for former vice president Walter F. Mondale. Fourteen of the South Carolina delegates are uncommitted.

Black Muslim leader Louis Farrakhan, whose threats against a Washington Post reporter became an issue in Jackson's campaign, had been scheduled to speak at the event but did not appear. His ab-

Moynihan Resigns Intelligence Panel Post, Assails CIA

By Joanne Omang
and Charles R. Babcock
Washington Post Staff Writers

Sen. Daniel Patrick Moynihan (D-N.Y.) resigned yesterday from the vice chairmanship of the Senate Select Committee on Intelligence because, he said, the CIA broke its "relationship of trust" by failing to inform the committee about its direct role in the mining of Nicaraguan harbors.

Moynihan made his decision known in an interview filmed Friday in his office and broadcast yesterday on ABC's "This Week With David Brinkley." He said in a statement from his office that the resignation was "the most emphatic way I can express my view that the Senate committee was not properly briefed on the mining of Nicaraguan harbors with American mines from an American ship under American command."

He said in a later telephone interview that a CIA briefing March 8 contained only a one-sentence reference in an 84-page transcript on the activities of U.S.-supported rebels in Nicaragua. An aide said the sentence was phrased passively, so that the senators were told only that "magnetic mines have been placed" in three harbors, without an explanation of the direct U.S. role.

The issue of what senators knew about the mining and when they

Covert Aid Salvage Try Under Way

By Charles R. Babcock
and Bob Woodward
Washington Post Staff Writers

The Reagan administration is trying to salvage faltering congressional and public support for its secret war against Nicaragua by attempting to focus new attention on the size of the Soviet and Cuban military buildup in Central America and playing down the controversy over U.S.-directed mining of Nicaraguan harbors.

In an effort to rescue \$21 million in funding for the covert operations, CIA Director William J. Casey told the Senate last week that the controversial CIA-directed mining of Nicaraguan harbors was not an integral part of the program. President Reagan and intelligence officials also began giving stronger emphasis to specific figures about the scope of the threat they see in the region.

witnesses after the confrontation.

Wayne Matthews, and ex-Nazis Ro-

plant organizer, Cesar V. Cauce, a that the nine men, tired by racist

See KLAN, A21, Col. 1

Crenshaw Wins

Ben Crenshaw shot 68 in the final round to win the Masters golf tournament by two shots over Tom Watson.

Details on Page C1

Cambodia Attack

Vietnamese forces occupying Cambodia overran a rebel base, sending thousands of refugees into Thailand.

Details on Page A20

Stepped-Up District Eviction Effort Begins Today

By Kenneth Bredemeier
Washington Post Staff Writer

The U.S. Marshals Service today starts a beefed-up effort to clear a backlog of evictions of D.C. tenants who are behind in their rent payments, under a plan that could dump 60 families and their belongings on the street each weekday.

Ten two-man teams of deputy U.S. marshals, at least twice the number used in the past, are scheduled to fan out across the city at 9 a.m. today to oversee the court-ordered evictions.

Some of the evictions were first

approved by D.C. Superior Court judges three years ago.

City officials last week unsuccessfully tried to block for two more weeks the extra evictions, long sought by some of the city's major landlords, for fear that those evicted will not have new homes or shelters.

But Stanley Morris, director of the U.S. Marshals Service, refused the city's request on grounds that too much planning, money and time had been invested by his agency in the effort to clear the backlog of 2,500 to 3,000 approved evictions at privately owned apartments and

D.C. public housing sites, a marshals spokesman said.

D.C. Social Services Commissioner Audrey Rowe yesterday said the Marshals Service "could have given us two years and we couldn't have coped with it. Our shelter budget is already in trouble." She said the city currently has temporary shelter space for only 12 more families, although the old Burdy School, at Fourth and O streets NW, is being equipped to house about 100 more.

City social service workers yesterday hand-carried letters to the 60 families scheduled to be evicted to-

day, warning them that it was "crucial that you make emergency plans for your family and property."

Other workers started telephoning people who are scheduled to be evicted in upcoming days and weeks, according to Bruce Glover, an aide to Rowe.

"We're facing a real crisis here," Glover said. "It is the biggest social problem since the '68 riots."

He said that the people to be evicted first owe between \$10 and \$2,000 each in overdue rent payments, although Rowe said some

See EVICTIONS, A21, Col. 1

names of the two men until their families could be notified.

U.S. and South African officials said the blast occurred about 4 p.m. [9 a.m. EST] at a gas station outside Oshakati in northern Namibia, but it was not immediately known what type of device caused the explosion. Namibia's administrator general, Willie van Niekerk, said a Namibian man was also killed and four other people were wounded.

Van Niekerk blamed the main Namibian insurgent group, the South-West Africa People's Organization, for the bombing, but there was no response from SWAPO. The organization has been fighting a 17-year guerrilla war to end South African control of Namibia, also known as South-West Africa, and has

See NAMIBIA, A20, Col. 1



Three of six men charged in Klan murder trial, from left: Lawrence Morgan, Jerry Smith and Roland Wood, on lunch break. Man at far right is not identified.

Klan Trial Opens to a Cry of 'Sham'

By Art Harris
Washington Post Staff Writer

GREENSBORO, N.C., Aug. 4 — Martha Nathan, whose husband and four other Communist Workers Party members were gunned down Nov. 3 at their "Death to the Klan" rally here, jumped to her feet today as the judge instructed jurors at the opening of the murder trial to deliberate fairly and impartially.

"This trial is a sham and a farce," Nathan shouted. "The U.S. government conspired with the Nazis and the Klan to murder my husband."

As the all-white jury was hustled out of court, Nathan refused an order from Superior Court Judge James Monroe Long to keep quiet and was gagged and charged with contempt of court.

Asked later if she had any defense for disrupting the proceedings, she said, "My husband was murdered."

"That's no excuse," responded Long.

Nathan and Florence Cauce, whose husband also was fatally shot that November day, each were sentenced to 90 days in jail for courtroom outbursts.

The incidents inside the tense, windowless courtroom about two miles

from the site of the shooting and around the corner from a movie theater showing "Revenge of the Patriots" underscored one fact that the defense and prosecution agreed upon at the outset: This is a politically loaded trial.

Four avowed Klansmen and two Nazis are each charged with five counts of first-degree murder and one count of felonious rioting. In an upcoming trial, five CWP members are charged with rioting.

If the Nazis and Klansmen go free and the communists to jail, it would lend a flavor of self-fulfilling prophecy to the rhetoric fired here today by the communists.

The outcome depends on the jurors' ability to divorce themselves from their feelings about the extremist politics of both sides.

"You are not here to choose between competing ideologies, but to determine if the defendants are guilty of the crimes for which they are indicted," Long said as Nathan, and then Cauce, interrupted the proceedings.

While Greensboro police SWAT teams patrolled the courthouse roof today, the communists engaged in mild guerrilla warfare inside, setting off a false fire alarm, unleashing a stink bomb in the court and vowing

to ignore any subpoenas to testify.

The general facts of the case are not likely to be disputed.

There were many eyewitnesses—including television reporters and print journalists—at the rally scene, a dingy black public housing project where the Nazi-Klan caravan rolled to a halt, shooting broke out and five communists died.

What attorneys disputed today in their opening statements, was who had attacked whom.

Assistant District Attorney Jim Coman said the prosecution would prove that the six defendants had set out to murder the communists in cold blood, rather than merely to disrupt the anti-Klan rally.

There were weapons in the van driven by Klansman Lawrence Gene Morgan, 27, a Lincolnton, N.C., machine operator, and in the car driven by Nazi Jack Wilson Fowler, 28, a Winston-Salem laborer, Coman said pointing at two of the six defendants.

"The defendants went there for the sole purpose of disrupting the rally, prepared to do everything from throw eggs to shoot to kill," said Coman. "If their only reason was to protest what the CWP had to say, why did they have to come armed to the teeth?"

But attorney Robert Cahoon, who is

defending Nazi Roland Wayne Wood, 35, argued that the events of Nov. 3 "did not occur in a vacuum," that the seeds had been planted at an earlier Klan rally in China Grove, N.C., that the communists had disrupted. Later, Cahoon said, the communists taunted the Klansmen, calling them "scum and cowards" and daring them to appear at the Nov. 3 "Death to the Klan" rally.

Moreover, the KKK-Nazi caravan was lured into a well-planned ambush, characterized by gunfire from rooftops and trees that forced its members to return heavy fire in self-defense, attorneys for the defendants argued.

Also on trial for murder are Klansmen Jerry Paul Smith, 32, a self-employed logger from the Lincolnton area; David Wayne Matthews, 24, of nearby Newton, N.C., who is recovering from heart surgery; and Colman Blair (Johnny) Pridmore, 37, a Lincolnton textile worker.

All the defendants are high school dropouts whose lives revolved around blue-collar frustration, earning little more than the minimum wage.

The slain communists were well-educated, college graduates like Michael Nathan, 32, a doctor devoted to radical political causes who never left behind his protest days at Duke University.

Greensboro detective J. H. (Rooster) Cooper, who followed the KKK-Nazi caravan to the shooting site, testified today that he saw Jack Fowler raise a semi-automatic rifle and fire in the direction of several of the victims. J. T. Matthews, a local police photographer who accompanied Cooper that day, corroborated most of Cooper's testimony and identified David Wayne Matthews as the man he saw pumping rifle fire into a crowd.

The Greensboro police were criticized for arriving late at the demonstration scene and allowing the fatal shooting to occur.

Swastika Mars Federal Official's Lawn

By Sandra G. Goodman
Washington Post Staff Writer

A large swastika was burned into the lawn of the Northern Virginia home of the director of the Federal Bureau of Alcohol, Tobacco and Firearms and a life-size hooded effigy was found yesterday morning hanging from a nearby tree.

Bureau director Glenn R. Dickerson, 53, and his wife Mary, were not at

The incident coincided with the opening yesterday in Greensboro, N.C., of testimony in the trial of six Nazi Party and Ku Klux Klan members charged with killing five members of the Communist Workers Party at a bloody anti-Klan rally last Nov. 3.

Earlier this month a Greensboro newspaper disclosed that an undercover agent of Dickerson's bureau had infiltrated the Nazi Party and knew in advance of the caravan by the Klan

at his home. A bureau spokesman declined to comment on the bizarre incident, saying he feared it might jeopardize the Greensboro trial.

Two bureau agents have been assigned to guard Dickerson's ranch-style home in the Franklin Forest section of McLean, a wooded neighborhood of \$200,000 homes.

Police said yesterday that the flame

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Swastika Mars Federal Official's Lawn

By Sandra G. Boodman
Washington Post staff writer

A large swastika was burned into the lawn of the Northern Virginia home of the director of the Federal Bureau of Alcohol, Tobacco and Firearms and a lifesize hooded effigy was found yesterday morning hanging from a nearby tree.

Bureau director Glenn R. Dickerson, 53, and his wife Mary, were not at their McLean home at the time of the 4 a.m. incident, which is under investigation by the Fairfax County police.

Shortly after the incident a woman phoned The Associated Press in Washington and said that the Communist Workers Party was responsible for the act. The woman did not identify herself nor disclose a motive.

The incident coincided with the opening yesterday in Greensboro, N.C., of testimony in the trial of six Nazi Party and Ku Klux Klan members charged with killing five members of the Communist Workers Party at a bloody anti-Klan rally last Nov. 3.

Earlier this month a Greensboro newspaper disclosed that an undercover agent of Dickerson's bureau had infiltrated the Nazi Party and knew in advance of the caravan by the Klan that culminated in the shootings. The agent, Bernard Butkovich, apparently failed to inform federal or local law enforcement officials of the caravan, although there is no indication that he knew in advance that violence would erupt.

Dickerson could not be reached for comment yesterday on the inci-

dents at his home. A bureau spokesman declined to comment on the bizarre incident, saying he feared it might jeopardize the Greensboro trial.

Two bureau agents have been assigned to guard Dickerson's ranch-style home in the Franklin forest section of McLean, a wooded neighborhood of \$200,000 homes.

Police said yesterday that the flaming swastika and the effigy, which bore a red dot in the center of its forehead, apparently signifying a bullet hole, was discovered by a neighbor who called police.

The neighbor, who was not identified, reported seeing three persons get out of a car, ignite the lawn with gasoline, string up the effigy and flee.

ca. political causes who never left behind his protest days at Duke University.

Greensboro detective J. H. (Rooster) Cooper, who followed the KKK-Nazi caravan to the shooting site, testified today that he saw Jack Fowler raise a semi-automatic rifle and fire in the direction of several of the victims. J. T. Matthews, a local police photographer who accompanied Cooper that day, corroborated most of Cooper's testimony and identified David Wayne Matthews as the man he saw pumping rifle fire into a crowd.

The Greensboro police were criticized for arriving late at the demonstration scene and allowing the fatal shooting to occur.

"Some of the things you will hear won't be flattering to the state of North Carolina," said Assistant District Attorney Coman, apparently referring, in addition, to recent disclosures that a federal agent infiltrated the Nazis and allegedly urged them to commit illegal acts, including carrying weapons, to the Nov. 3 rally.

Bolivia Accuses U.S. of Violations in Cable News

Political Vagabonds Hunt for Piece of Convention Action



Gov. Harry Hughes, left, and Rosalie Abrams, right, talk with Carter staffers Edwin Crawford and Betty Rainwater.

Associated Press



Mayor Barry and other D.C. delegates cheer results of Monday's voting.

By Margaret Thomas—The Washington Post

By Jackson Diehl

Washington Post Staff Writer

NEW YORK, Aug. 12—Hyman Pressman, the flamboyant controller of Baltimore City, spent the opening day of the Democratic National Convention here shouting his contempt for President Carter at every available caucus and distributing wooden nickels bearing the legend "Value of the Carter Nomination."

Although these lobbying efforts might have been appreciated by campaigners for Sen. Edward M. Kennedy, there was no particular reason, for Pressman to work so hard. In fact, there was really no reason for Pressman to be here. He is not a delegate, or even an alternate. He has no official role in any presidential platform or lobbying campaign.

Nevertheless, Pressman and at least half a dozen other state party war-horses and officials are here in New York this week, hanging onto a Maryland delegation that excluded them with reform-oriented selection procedures and minority quotas.

Instead of brokering votes they might have commanded a decade ago, Pressman and his outcast political colleagues have spent their time begging for floor passes from friends, staking out hospitality suites and attempting to lobby delegates who have no obligation to listen to them.

"They're our groupies now," said Leonard Lucchi, a Young Democrats leader from Bowie who took advantage of the changes in party rules to win a seat as a Kennedy alternate. "I prefer to see it this way. We have a more diverse delegation, and everybody has an equal voice."

Some of the more prominent hangers-on in Maryland, including Baltimore Mayor William D. Schaeffer and Baltimore County Executive Donald Hutchinson, say they deliberately refrained from running for seats at the convention "to give others a chance." Both Schaeffer and Hutchinson were here Monday for a convention rules committee meeting, then decided to stick around to watch the show.

Others, like Montgomery County State Senator Laurence Levitan, Baltimore ward boss Clarence (Du) Burns and Baltimore State Del. John Pica, tried and failed to win delegate seats.

"I wanted to be a delegate and come to the convention," said Levitan, a powerful committee chairman in Annapolis. "But that selection system

After the Loss, Party Fences Slow to Mend

By Karlyn Barker and Jackson Diehl
Washington Post Staff Writers

NEW YORK, Aug. 12—Two Washington area congressmen, beaten but not bowed in their losing campaign to block President Carter's renomination, were welcomed back into the Carter fold here today by delegates willing to forgive and forget.

Northern Virginia Rep. Herb Harris strolled cheerfully around the floor of the subdued Democratic gathering at Madison Square Garden this afternoon and made light of his misadventures with the Carter administration.

"Oh, they just love me," teased Harris, who acknowledged that his support for the "open" convention proposal championed by Sen. Edward M. Kennedy (D-Mass.) and

his suggestion that Vice President Walter Mondale would make a fine replacement for Carter drew complaints from many of his pro-Carter constituents.

For Rep. Michael D. Barnes of Maryland, the loss of the open convention fight was more than a politically embarrassing defeat. It brought an end to the instant celebrity status he enjoyed as a spokesman for the "dump Carter" forces in Congress.



Maryland delegates Bobby Scott, pointing, and Mike Hill, corner Rep. Harris.

By Margaret Thomas—The Washington Post

Maryland delegates Bobby Scott, pointing, and Mike Hill, corner Rep. Harris.

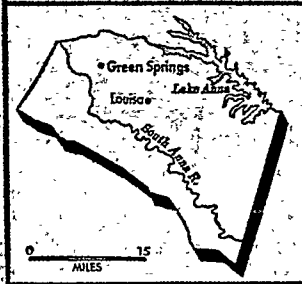
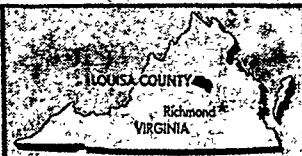
By Marjaret Thomas—The Washington Post

support the "open" convention proposal championed by Sen. Edward M. Kennedy (D-Mass.) and

lebrity status he enjoyed as a spokesman for the "dump Carter" forces in Congress.

situations have been very supportive, and from my experience, you See AFTERMATH, C3, Col. 1

a powerful committee chairman in Annapolis. "But that selection system See MARYLAND, C3, Col. 1



By Richard Furno—The Washington Post

Judge Overturns Historic Status Of Section of Louisa County, Va.

By Peter Elkind
Washington Post Staff Writer

A federal judge has wiped out the Interior Department's historic landmark designation for a bucolic section of Virginia countryside, possibly opening the way for massive strip-mining operations there.

The ruling by U.S. District Judge Robert R. Merhige could encourage opponents of the department's more than 1,500 such sites to challenge their historic status in the nation's courts.

The judge, sitting in Richmond, ordered the department to produce clearer standards for what constitutes a landmark and attacked the process

it has used in the past as "vague and open-ended."

The decision also may ease the path for two companies that hold rights to strip mine on the 14,000-acre Green Springs area of Louisa County for vermiculite, a flaky mineral used as a soil conditioner, in thermal and electrical insulation and in cat litter. A civic group has waged a bitter fight for years to block the strip mining, claiming the mines would destroy an area rich in Civil War history and filled with prized 18th and 19th-century homes.

In Monday's opinion, Merhige disputed the historical claims and said the public had failed to have "mean-

See LANDMARK, C2, Col. 6

City Schools Abandon Driver Education

By LaBarbara Bowman
Washington Post Staff Writer

District high school students can strike driver education from their fall class schedules because the Board of Education has scrapped the popular course to save money.

But while the school system will save almost \$750,000 a year by cutting the program, parents will have to pay higher auto insurance rates for their teen-age drivers and the police department will face the annual loss of \$1 million in federal funds.

The course is only one of the latest cuts the board has made to reduce its budget for the fiscal year that begins Oct. 1. More than a thousand staff

positions, including 714 teachers jobs, 24 in driver's education, have also been eliminated.

Since 1965, most insurance companies have offered a 10 percent discount on car insurance to parents whose children pass a school's driver education course. That discount can mean a savings of \$50 to \$100 for a family which carries the standard policy and whose child has a good driving record.

According to spokesman for the Government Employees Insurance Company (GEICO), the District's largest car insurance company, the standard policy for a District family with a 16-year-old son and one late-model car

would rise from \$712 to \$811 if the child cannot take driver's education in school.

District residents whose children attend private and parochial schools also enjoyed the reduced rates if their children took the class on Saturdays or during the summer. Commercial driving school classes do not now qualify teen-agers for the discount, according to the Insurance Information Institute.

Since the driver education program was started 31 years ago, an estimated 110,000 students have taken the course, according to Frank Bolden, di-

See DRIVERS, C3, Col. 5



By James A. Farrell—The Washington Post

John Younger holds his daughter, Tonya Michelle, after winning her custody.

Unwed Father Wins Custody Of Daughter, 2

By Thomas Grubisch
Washington Post Staff Writer

A 29-year-old Alexandria unwed father yesterday won custody of his 2½-year-old daughter after he told a Virginia judge that the child's mother repeatedly frustrated his efforts to visit the child.

"I'm beaming all over," said the father, John Younger, a Northern Virginia tow truck operator, after the court decision.

The ruling, by Alexandria Domestic Relations Court Judge Joseph L. Peters Jr., was the second in a week in Northern Virginia that took a hard line against parents who try to thwart judicial orders granting child visitation rights.

Last week a Fairfax County jury awarded \$25,000 in damages to a father who claimed his divorced wife had prevented him from visiting their three daughters.

In yesterday's case, the Alexandria judge sided with Younger's arguments that he should be granted custody of his daughter who had been living in Southside Virginia with her mother.

"I'm not trying to keep her from her mother," Younger said. "I only wanted to be able to see her but her mother wouldn't let me."

Until recently, courts have been reluctant to enforce visitation agreements when one parent refuses to cooperate, according to various groups representing divorced fathers.

Judge Peters' decision yesterday was described as "the logical exten-

See CUSTODY, C3, Col. 4

JUDY MANN

The Corporate Woman: Invading a Male World

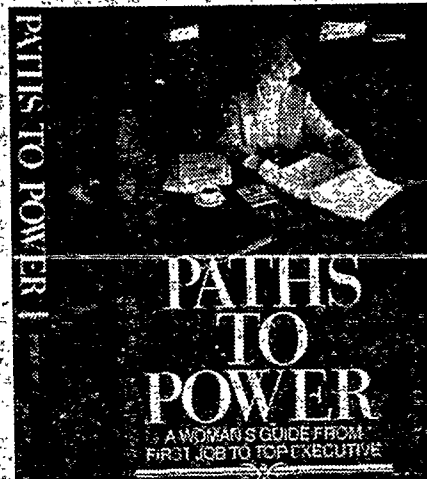
THE CRITICAL DIFFERENCE between men and women, writes Natasha Josefowitz, is that men will and women hope, because that is what society expects. "When a man achieves something it is normal, expected," she writes. "When a woman achieves the same thing, it is extraordinary, unexpected. When a male colleague of mine recently published a book, his family and friends thought it was about time. Now that I am publishing this one, my family and friends find it absolutely wor-drous. My colleague had planned to; I had hoped to."

The book Josefowitz has written is "Paths to Power: A woman's Guide from First Job to Top Executive," published by Addison-Wesley. It is a breezy and trenchant guide to the corporate world

Hampshire. With example after example, she explains how women's attitudes and social conditioning, as well as men's inhibit the progress of women in the business world.

Josefowitz is most intrigued by power, and how corporate players use it—or fail to. Power, to her, is forcefulness—the ability to exercise control—and effectiveness. The roadblocks to women's power come from within—through socialization as to what good girls ought to be all the way to the current superwomen expectation—and from without—through unfair hiring and promotion practices, and male stereotypes of what women should be.

"Authority," she writes, "for most women, has always been in the hands of others, first parents, then teachers. This is normal for both growing boys and girls. Once in school, however, children find that status and authority shift to male figures. The books they read and the media they are exposed to all confirm this. The teachers are women, the principals, men; the nurses are women, the doctors, men. . . . Men are in charge; women at best merely help." The result of this kind of con-



Hyattsville Woman Faces Charges In Heatstroke Death of Little Girl

By Sandra G. Boodman
Washington Post Staff Writer

Fairfax County prosecutors yesterday charged a 24-year-old Hyattsville woman with involuntary manslaughter in the death of a 3-year-old girl. The child died Aug. 4 of heatstroke after being left alone inside a closed automobile.

Assistant Fairfax prosecutor Tom Gallahue said that an attorney for Kathy Elizabeth Daniel, who was caring for the child when she died, has agreed that the woman will surrender to authorities today or Thursday.

Daniel's attorney, Donald M. White of Ashland, declined yesterday to comment on the charge, which carries a maximum penalty of five years in prison. An autopsy performed on the body

Daniel, who shared an apartment with the child, her 20-year-old mother, and an aunt, told police she had left the child alone for only 15 minutes, while she went inside the office of a Falls Church food service company, where she had been employed.

Falls Church police say they believe the child had been left alone in the car for nearly two hours. They theorize that Daniel, a saleswoman, may have intended to return to the car and begin her rounds, but may have lost track of time because she was fired when she entered her office.

The child's mother, Annette Harrington, and her aunt, 24-year-old Brenda Harrigan, said last week that they believe their child was asleep when Daniel entered the office. Dan-

Invading a Male World

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See MANN, C2, Col. 2

TO POWER

PATHS TO POWER

A WOMAN'S GUIDE FROM
FIRST JOB TO TOP EXECUTIVE

NATASHA JOSEFOWITZ

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Daniel's attorney, Donald M. White of Ashland, declined yesterday to comment on the charge, which carries a maximum penalty of five years in prison.

An autopsy performed on the body of Katrina Patrice Harrigan showed that the child died of heatstroke induced by temperatures inside Daniels' unshaded car which police say probably climbed to more than 130 degrees.

and an aunt, told police she had left the child alone for only 15 minutes while she went inside the office of a Falls Church food service company where she had been employed.

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The child's mother, Angetta Harrington, and her aunt, 24-year-old Brenda Harrigan, said last week that they believe their child was asleep when Daniel entered the office. Daniel reportedly told police that Katrina had asked to stay in the car but relatives said that the child preferred accompanying them on errands rather than waiting alone in a car.

Pose Major Hurdle for A-Plants — A3

Washington Post

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HOW: STILL UNREPENTANT



...giving testimony at Gang of Four trial in Peking for abuses during Cultural Revolution. Story on Page A29.

of Tooth Decay, Nip Dentists' Bills

of the vaccine will "re-
dental profession," ac-
Michael Cole, researcher
l Institutes of Health
ere already is a shortage
dentists in some areas
a chemical that fortifies
decay, is present in the

cleaning the mouth will still cause decay
even in the presence of a vaccine.

All four of the competing teams
working on the new vaccine have the
same basic idea: to stimulate natural
antibodies in the saliva. These anti-
bodies attack the bacteria that cause
decay, called *streptococcus mutans*,
and apparently prevent them from
latching onto the teeth to grow de-
structive colonies.

In people with illnesses that prevent
production of saliva, and thus of these
antibodies, tooth decay is quick and ru-
inous. "The teeth deteriorate practically
before your eyes," said Cole. "ST..."

The antibodies in the saliva defend
against this disaster, but cannot succeed
completely against the modern, sugar-
laden diet.

To stimulate the body to make more
antibodies, a vaccine is created, con-
sisting of dead streptococcus germs or
parts of them. These foreign bodies,
when introduced into the body, stimu-
late a large increase in antibody pro-
duction — five-fold or more.

One vulnerability of *streptococcus*
mutans is that it must have a way of
attaching itself to the teeth before it
can create decay. The bacterium an-

Poland Acts To Defuse New Crisis

Authorities Release Two Activists; Union Drops General Strike

By Michael Dobbs
Special to The Washington Post

WARSAW, Nov. 27 — Poland's
main independent trade union
movement, Solidarity, today called
off a threatened general strike in
the Warsaw region following the dra-
matic early-morning release of two
imprisoned workers.

After an all-night meeting, the
presidium of Solidarity's Warsaw
branch announced that it would hold
talks with government representa-
tives later today for the appointment
of an official commission to examine
the union's other grievances. These
include demands for the freeing of
four other political activists and a re-
duction in the powers of the coun-
try's security apparatus.

The decision removes, for the mo-
ment at least, the prospect of a ma-
jor confrontation between the Polish
government and the union. Plans
had been made for up to 2,000 fac-
tories in the Warsaw region to stop
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The breakthrough came shortly
after 1 a.m. when Jan Narozniak, a
volunteer worker in Solidarity's
Warsaw office, was released from po-
lice custody. It was his arrest last
Friday, on a charge of disclosing
state secrets, that sparked the latest
crisis.

Freed with him was Piotr Sapielo,
a worker in the prosecutor general's
office, who is alleged to have leaked
a secret document to Solidarity out-
lining instructions to the legal au-
thorities for the harassment and
prosecution of dissidents. Upon their
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See POLAND, A38, Col. 3

ring testimony at Gang of Four trial in Peking for abuses during Cultural Revolution. Story on Page A29.

United Press International

Not Tooth Decay, Nip Dentists' Bills

of the vaccine will "re- dental profession," ac- Michael Cole, researcher at Institutes of Health. ere already is a shortage dentists in some areas a chemical that fortifies decay, is present in the

cleaning the mouth will still cause decay even in the presence of a vaccine.

All four of the competing teams working on the new vaccine have the same basic idea: to stimulate natural antibodies in the saliva. These antibodies attack the bacteria that cause decay, called *streptococcus mutans*, and apparently prevent them from latching onto the teeth to grow destructive colonies.

In people with illnesses that prevent production of saliva, and thus of these antibodies, tooth decay is quick and ruinous. "The teeth deteriorate practically before your eyes," said Cole. "Every tooth surface is covered with decay within weeks."

The antibodies in the saliva defend against this disaster, but cannot succeed completely against the modern, sugar-laden diet.

To stimulate the body to make more antibodies, a vaccine is created, consisting of dead streptococcus germs or parts of them. These foreign bodies, when introduced into the body, stimulate a large increase in antibody production — five-fold or more.

One vulnerability of *streptococcus mutans* is that it must have a way of attaching itself to the teeth before it can create decay. The bacterium apparently has an appendage that hitches

See TEETH, A14, Col. 1

on families to combat own efforts — through regular brushing and lar visits to the dentist d somewhat by the vaccine. But researchers ine will not be a cure- much sugar and not

Italian President Cites 'Failures' In Quake Relief; Minister Resigns

From News Services

ROME, Nov. 26 — As the death toll in Sunday's earthquake rose toward 5,000, President Sandro Pertini bitterly criticized the government's relief efforts today, and the interior minister promptly resigned.

After Pertini went on national television to castigate the "serious failures" in emergency aid, Interior Minister Virginio Rognoni submitted his resignation to Arnaldo Forlani to "remove government tensions that are making difficult . . . the necessary action."

Industry, responsible for the official toll stood at 4,000 dead and at least 100,000 and presumed dead are listed as in- 200,000 homeless. 100,000 in tremors

emergency relief program designed to provide every family that lost its breadwinner with an immediate grant of \$11,000.

Pertini, who returned to Rome last night from a tour of the southern region, said: "There have been serious failures. There is no doubt about that. Whoever is responsible has to be charged. The first-aid relief that was supposed to be there was not."

The president signed the aid measures into effect as an immediate decree only minutes after the eight-hour Cabinet meeting ended and then went on television to give Italians an emotional picture of the catastrophe.

The 84-year-old president said that during his two-day visit to the devastated area, "I was surrounded by inhabitants who showed me their despair and pain, but also their rage. After 48 hours, the needed aid had not yet arrived in those villages.

"In 1970, parliament voted laws on natural calamities. I now discover they have never been put into effect," he said.

See QUAKE, A29, Col. 1

Brezhnev Seeks 'Realistic Policy' to Improve Ties

vin Klose
Foreign Service

26 — Soviet
Brezhnev declared

Third World Nations Join

Call for Afghan Pullout — A27

The Washington Post

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Weather
 Today—Partly cloudy through tonight, high 50-55, low 27-34. The chance of rain is 10 percent today, 20 percent tonight: Saturday—Sunny, high 50-55. Yesterday—3 p.m. AQI: 45; temperature range: 51-33. Details on Page B2.

103rd Year No. 352

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FRIDAY, NOVEMBER 21, 1980

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President Welcomes Reagan for a Visit To His New Address

By Lee Lescaze
Washington Post Staff Writer

President Carter welcomed Ronald Reagan to the White House yesterday, capping Reagan's inspection tour of the city he will dominate as president starting Jan. 20.

"I think you'll like the place," Carter said as he and Rosalynn Carter greeted the president-elect and Nancy Reagan.

Carter's words were warm as though Reagan were a longtime associate instead of a man who the president suggested during the campaign would be a danger to the future of the nation. "We're very glad to have you here," Carter said to the man who defeated him Nov. 4.

The visit got off to an awkward start. Reagan arrived about one minute early and a White House usher was on hand to open his limousine door. No one else was on hand, however.

The Reagans waved to reporters and photographers, turned and walked under an awning toward the open door. There was no sign of a host and hostess.

Just as the Reagans reached the threshold, the Carters came running to meet them. There was much checking of watches and the president remarked that his guests were early. Then the president led the foursome back outside to pose for photographers.

See REAGAN, A6, Col. 1

Sen. Tower is not likely to get Defense post, Reagan transition sources say. Page A12



President Carter shows President-elect Reagan points of interest on grounds of the White House. By Frank Johnston — The Washington Post

U.S., Iran Ready To Bargain About Release Conditions

By Walter Pincus and John M. Goshko
Washington Post Staff Writers

Top-ranking Iranian and U.S. officials said yesterday that the United States has accepted "in principle" Iran's four conditions for release of the 52 American hostages, and sources confirmed that, in effect, the two countries have begun a process of indirect bargaining about implementation of the terms.

In Tehran, Iranian Prime Minister Mohammed Ali Rajai told a news conference that Iran would seek some clarifications of the U.S. response to the conditions, which has been under study within his government since Nov. 12. The American document, according to sources, describes in detail what the U.S. government can do — and in some cases cannot do — to implement the four Iranian conditions that were first enunciated Sept. 12 by Ayatollah Ruhollah Khomeini.

Rajai also raised the possibility that more information will be provided to Washington on just what the Iranian government is seeking before it turns the hostages loose. He said, "America pretends that it has not understood the issue quite well. We are ready to give more explanation."

Rajai's remarks were the first public declaration that Iran was prepared to



MOHAMMED ALI RAJAI ... seeks clarifications

Reagan Soviet Policy: No Slamming Windows

Vouchers Proposed For Housing Aid

a failure and should be replaced by tax breaks and other incentives to businesses to train and hire persons out of work.

"I don't expect this will be wildly

Aide Sees Pursuit Of Mutual Interest

the Soviet Union," said Richard V. Allen, President-elect Ronald Reagan's chief foreign policy aide, who conceded in an interview, nonetheless, that there are some Reagan advisers "who believe

Texan Confesses Plot to Defraud Libya and Vesco

Vouchers Proposed For Housing Aid

By Herbert H. Denton
Washington Post Staff Writer

President-elect Ronald Reagan was urged yesterday by his task force on the cities to end the government's housing programs for the poor and instead provide persons in low-income households with vouchers so they could live where they choose.

The advisers also proposed phasing out the multibillion-dollar "public sector" jobs program, saying it has been

Gilchrist Admits Job Offers to Liquor Prober

By Loretta Tofani
and Chip Brown
Washington Post Staff Writers

Montgomery County Executive Charles Gilchrist conceded yesterday that a controversial critic of his administration was offered several jobs working for the county but insisted the offers were made with the implicit understanding that the critic later would be subject to the normal criteria of the county merit system.

"We never offered a job other than in the context of the merit system," Gilchrist told a crowded news conference.

Faced with the disclosure of secret tapes on which two of his aides are heard telling Leonard I. Colodny that he could have several different jobs if he wanted them, Gilchrist appeared to contradict his previous assertion that he and his aides never had offered Colodny merit jobs. The county executive sought to explain the contradiction by coming up with a stricter definition of a job offer.

A job offer, he said, occurs when the personnel office tells a job applicant he has received a job and asks the applicant to come in and sign a contract. "We never gave him a contract," said Gilchrist, referring to Colodny.

The controversy over Colodny, a one-time political ally who later became a sharp critic of the Gilchrist administration's handling of the county Department of Liquor Control, took a new turn with the disclosure of taped telephone conversations made last February in which two of Gilchrist's aides, Gerry Evans and Robert Wilson, offered Colodny

a failure and should be replaced by tax breaks and other incentives to businesses to train and hire persons out of work.

"I don't expect this will be wildly popular among liberals," said San Diego Mayor P. Wilson, who headed the 10-member task force, which included many sprinkling of conservative academics. "After billions spent for [public service jobs], we still have massive unemployment. The good intentions of [Great Society programs] are not enough."

Later, another urban advisory group headed by Reagan, also headed by Wilson but including mostly Republican mayors from Sun Belt cities, announced that
See CITIES, A10, Col. 1

Aide Sees Pursuit Of Mutual Interest

By Peter Osnos
Washington Post Staff Writer

Despite the strong rhetoric of the campaign, the Reagan administration's policy toward the Soviet Union will not be "unrepentingly hostile" to the Kremlin and will search instead for areas of "mutual interest" in trade and arms control that might persuade Moscow to be more restrained.

"You can't just enter office with the intention of cutting off relations with

the Soviet Union," said Richard V. Allen, President-elect Ronald Reagan's chief foreign policy aide, who conceded in an interview, nonetheless, that there are some Reagan advisers "who believe total denial is the only way to go."

Allen, who is the leading candidate to be Reagan's national security assistant, clearly disagrees with that view. "We may shut a negotiation down here and begin a new one there," Allen said, "or change the format or agenda or whatever... but we don't think it's very productive to simply slam the window...."

The unanswered question at this early stage is whether the Soviets are willing to engage in any significant bar-
See ALLEN, A7, Col. 1

Sponsored Minority Contract Guarantees

Delegate's Bills Aided Firm That Hired Him

By Jackson Diehl
Washington Post Staff Writer

Nathaniel Exum, a state legislator from Prince George's County, sponsored or voted to enact several laws guaranteeing government contracts for minority firms at a time when he was employed by a paving and excavation company that has won more than \$1 million in business through such programs.

The paving contractor, Jones & Artis Construction Co. of Landover, is a minority firm controlled by James L. Artis and Carl D. Jones, a close associate of Exum. Jones said he brought Exum into the company in 1977 and by the following year paid him a regular salary and cut him in on the firm's annual bo-

nuses as president of a subsidiary company. The subsidiary, Jones said, was set up to avoid union labor and "to help Nat."

Exum sponsored two bills and supported two others introduced by colleagues in 1978 and 1979 that sought to expand minority contracting programs in all Maryland state departments, Prince George's County and the Washington Suburban Sanitary Commission. The 40-year-old delegate supported or worked for three of the bills in 1978, a year in which he reported receiving \$15,500 from Jones & Artis, according to state records.

Jones & Artis won two contracts worth \$1.1 million dollars from the state in 1977 and 1978 under the pro-

grams, which are principally designed to route 10 percent of the state's business to minorities. In addition, the company has recently completed a \$980,000 contract for the WSSC through another subsidiary. Although the firm is relatively large for a minority construction company, its business so far with Maryland ranks it below the state's most common minority contractors, state officials said.

In an interview, Exum, who was elected to the House of Delegates in 1974, denied any conflict of interest and said he had "made a point" of never allowing his legislative work to conflict with his business interests. He said he was not aware that Jones & Artis
See EXUM, A32, Col. 5

the hostages loose. He said, "America pretends that it has not understood the issue quite well. We are ready to give more explanation."

Rajai's remarks were the first public declaration that Iran was prepared to bargain over implementation of the four conditions. Earlier this week, The Washington Post reported that the small group in the prime minister's office handling the hostage issue was seeking additional information about the U.S. response.

The Iranian prime minister described as correct a statement made Wednesday in Algiers by Hojatoleslam Ali Akbar Hashemi Rafsanjani, Iran's parliamentary speaker, that the United States had agreed in principle to the Iranian conditions.

In Washington, Secretary of State Edmund Muskie responded to reports of Rajai's remarks by saying, "We have said publicly that we accepted the four points in principle. But that doesn't tell you much about the details, does it?"

Although no timetable was mentioned by sources in either Washington or Tehran, Rajai implied that he did not want the process to drag on.

The Iranian reply to the U.S. response, he said, was "being prepared." It apparently will be given to the Algerian diplomats now in Tehran for transmission to the United States.

Rajai said, "We hope the American government... does not try to mix in political discussions and carry on protracted talks."

The conditions, approved Nov. 2 by Iran's parliament, called on the United States to pledge not to interfere with Iranian internal affairs, to release the more than \$8 billion in blocked Iranian assets in the United States, remove
See HOSTAGES, A25, Col. 1

Texan Confesses Plot to Defraud Libya and Vesco

By Charles R. Babcock
and Morton Mintz
Washington Post Staff Writers

A Texas acquaintance of Democratic National Committee Chairman John C. White admitted in federal court in New York yesterday that he tried to con the Libyan government and fugitive financier Robert L. Vesco into believing he could bribe top Carter administration officials to release embargoed airplanes.

James C. Day, 48, a former state legislator who has a prior criminal record, pleaded guilty to conspiring to defraud the Libyan government in a \$1 million scheme that included the use of an impostor for White and false claims that President Carter's top aide, Hamilton Jordan, had agreed to take part in the plot.

Day's plea yesterday was the first action resulting from a long-running grand jury investigation of the scheme. While Day's statements in open court exonerated Jordan, the court papers were less clear about White's role.

Raymond Levites, the prosecutor in the case, said yesterday that the investigation is continuing.

White's attorney, Stuart Pierson, said yesterday that he was disappointed that the criminal information to which Day pleaded guilty was not more emphatic about White's innocence. "Our position is that he wasn't implicated at all, and that he was a victim and not a participant," Pierson said of White.

Pierson said he still hopes for an af-
See VESCO, A25, Col. 4

Hill Panel Finds Chicago Official Given Condo Deal

By Jerry Knight
Washington Post Staff Writer

The former chief tax assessor for the city of Chicago helped a giant real estate firm called American Invscos get a \$216,000 reduction in property taxes, then shortly afterward acquired two units in a Rockville condominium owned by the firm, according to a confidential congressional report.

The Chicago assessor, Thomas Tully, bought his two apartments in the Grosvenor Park complex under terms that allowed him to delay paying for the condominiums until their value had increased by several thousand dollars.

Tully signed an agreement to buy one Grosvenor apartment for

Mao's Widow, 9 Others on Trial in Peking

By Michael Weisskopf
Washington Post Foreign Service

PEKING, Nov. 20 — More than four years after the violent Cultural Revolution ended with the arrest of its radical leaders, China today began the long-awaited Gang of Four trial. It is designed to serve as much as a signpost for the future as a condemnation of past excesses.

At 3 p.m., Mao Tse-tung's widow, Jiang Qing, and nine other once powerful leaders, some now so aged and feeble that they needed the help of nurses, were led by bailiffs into a courtroom near Peking's historic Tienanmen Square and instructed to stand behind a long metal bar as the chief judge announced their names.

A five-minute televised version of this dramatic moment, broadcast tonight, focused on a dignified and de-

The cavernous courtroom was filled with nearly 900 spectators representing victims of the chaotic decade and every geographic, political, ethnic and professional group. All were invited to Peking by the government to witness China's first show trial.

For the millions of Chinese who suffered during the economically disastrous and frequently bloody period from 1966 to 1976, the trial provides a chance to bury this unhappy era with full sanction of the government. Through nightly television broadcasts, full newspaper accounts and even trial photographs sold by party units, the Chinese will be given an extraordinary glimpse at the downfall of their former tormentors.

In a more lasting way, the trial could determine the course of Chinese politics



...faced with the disclosure of secret tapes on which two of his aides are heard telling Leonard I. Colodny that he could have several different jobs if he wanted them, Gilchrist appeared to contradict his previous assertion that he and his aides never had offered Colodny merit jobs. The county executive sought to explain the contradiction by coming up with a stricter definition of a job offer.

A job offer, he said, occurs when the personnel office tells a job applicant he has received a job and asks the applicant to come in and sign a contract. "We never gave him a contract," said Gilchrist, referring to Colodny.

The controversy over Colodny, a one-time political ally who later became a sharp critic of the Gilchrist administration's handling of the county Department of Liquor Control, took a new turn with the disclosure of taped telephone conversations made last February in which two of Gilchrist's aides, Gerry Evans and Robert Wilson, offered Colodny jobs that by law must be filled through the merit system. The existence of the tapes was disclosed

See LIQUOR, A30, Col. 1.

Dow Tops 1,000 Level

A surge of activity near the closing bell yesterday sent the Dow Jones Industrial Average, the measure of stock prices, above the 1,000 level for the first time since Dec. 31, 1976. The closing figure was 1,000.17, up 9.13 for the day.

Details on Page E1

Mao's Widow, 9 Others on Trial in Peking

By Michael Weisskopf
Washington Post Foreign Service

PEKING, Nov. 20 — More than four years after the violent Cultural Revolution ended with the arrest of its radical leaders, China today began the long-awaited Gang of Four trial. It is designed to serve as much as a signpost for the future as a condemnation of past excesses.

At 3 p.m., Mao Tse-tung's widow, Jiang Qing, and nine other once powerful leaders, some now so aged and feeble that they needed the help of nurses, were led by bailiffs into a courtroom near Peking's historic Tienanmen Square and instructed to stand behind a long metal bar as the chief judge announced their names.

A five-minute, televised version of this dramatic moment, broadcast tonight, focused on a dignified and defiant Jiang Qing, the 67-year-old former screen actress turned political radical, who led the Gang of Four Politburo members during the most devastating stages of the Cultural Revolution.

For the next 140 minutes, the chief prosecutor read aloud a 20,000-word indictment charging the defendants with 48 offenses ranging from a plot to assassinate the late chairman Mao and stage an armed coup d'etat to persecuting over 500,000 Chinese officials and ordinary citizens, including more than 34,000 who died in just a handful of incidents.

The cavernous courtroom was filled with nearly 900 spectators representing victims of the chaotic decade and every geographic, political, ethnic and professional group. All were invited to Peking by the government to witness China's first show trial.

For the millions of Chinese who suffered during the economically disastrous and frequently bloody period from 1966 to 1976, the trial provides a chance to bury this unhappy era with full sanction of the government. Through nightly television broadcasts, full newspaper accounts and even trial photographs sold by party units, the Chinese will be given an extraordinary glimpse at the downfall of their former tormentors.

In a more lasting way, the trial could determine the course of Chinese politics for years to come. As an acute official attack on radicalism, the case is seen as a harsh setback to the Maoist strategy for China's development, which relied on spiritual rather than material incentives, forced collectivization and an autarkic foreign policy.

For the team of China's new pragmatic officials led by Deng Xiaoping, the trial could provide enough political momentum to uproot residual leftists in the Communist Party, the state bureaucracy and military who oppose Deng's more moderate policies stressing

See CHINA, A19, Col. 1.



Mao's widow

Hill Panel Finds Chicago Official Given Condo Deal

By Jerry Knight
Washington Post Staff Writer

The former chief tax assessor for the city of Chicago helped a giant real estate firm called American InvSCO get a \$216,000 reduction in property taxes, then shortly afterward acquired two units in a Rockville condominium owned by the firm, according to a confidential congressional report.

The Chicago assessor, Thomas Tully, bought his two apartments in the Grosvenor Park complex under terms that allowed him to delay paying for the condominiums until their value had increased by several thousand dollars.

Tully signed an agreement to buy one Grosvenor apartment for \$118,000 in November 1979, but the sale was not completed and the deal recorded until seven months later, in July 1980, congressional investigators discovered. By that time similar apartments were being advertised for \$135,000 and now are worth nearly \$150,000, tenants of the project said yesterday.

American InvSCO's dealings with Tully are among dozens of the company's transactions being probed by a House subcommittee chaired by Rep. Benjamin Rostenkowski (D-N.Y.) that is looking into the

See CHINA, A19, Col. 1.

182
Box 4

001 09030 E QZ
40404025 E QZ

Worksheet

On 4/3/84, at the request of DOJ attorney [redacted], four vocoder charts were run at 500 Em/sec on a Honeywell 1806A (6" paper) of slot #4 on channel 11 (Q407).

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In an attempt to imitate the waveform provided by [redacted], the waveform of slot #4 on Q407 was run at progressively low pass filters thru 2 Itano 4200 Electron Filters until 100 Hz was found to ~~resemble~~ closely resemble the overall slope (high pass filter out). R & D & computer personnel state that difference between 100 Hz waveform & [redacted] is filter configuration - his is steeper.

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Direct copy made of gunslot #4 on Q407.
(Naga 10-S, left channel, 15 ips → Naga TRVR, 7 1/2 ips, both channels 1/2-track, 5" reel, 1.5 mil)

Direct copy also made of portion of Q407 containing gunshots - copied as above.

Two filtered charts, two unfiltered charts, and the direct copy of all the gunshots on Q407 to [redacted] on 4/4/84 in USA's office, Winston-Salem, N.C.

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Assistant Attorney General
Civil Rights Division

November 17, 1983

Director, FBI

GREENKIL

Reference is made to your letter of October 19, 1983, requesting, in part, that SA [redacted] of the Technical Services Division be available for trial in captioned matter, which begins on January 9, 1984, in Winston-Salem, North Carolina.

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For your information, SA [redacted] has a prepaid vacation commitment from January 29, 1984 until February 5, 1984, which is outside the United States. It is requested that his testimony in captioned matter not be scheduled for that week.

1 - 44-81521

1 - [redacted]

Room 5131

1 - [redacted]

1 - [redacted]

1 - [redacted]

1 - [redacted]

BEK:jmr (8)

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Memorandum



Exec AD Adm. _____
Exec AD Inv. _____
Exec AD LES _____
Asst. Dir.:
Adm. Servs. _____
Crim. Inv. _____
Ident. _____
Insp. _____
Intell. _____
Lab. _____
Legal Coun. _____
Off. Cong. & Public Affs. _____
Rec. Mgnt. _____
Tech. Servs. _____
Training _____
Telephone Rm. _____
Director's Sec'y _____

To : [redacted]

Date December 23, 1983

From : [redacted]

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Subject : GREENKIL

On December 19, 1983, Department of Justice Attorney [redacted] defense attorneys [redacted] of Forensic Communication Associates, Gainesville, Florida, and SA [redacted] met at Federal Bureau of Investigation Headquarters regarding some of the scientific tests performed in captioned matter. The defense attorneys were given a copy of a scaled map showing vehicle locations as plotted by SA [redacted] of the Laboratory Division and also allowed access to the visicorder charts prepared by SA [redacted].

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The defense attorneys and the individuals from Forensic Communication Associates were very displeased that Attorney [redacted] would not allow SA [redacted] to produce his notes and other charts, nor permit him to explain his scientific methodology.

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RECOMMENDATION: None. For information only.

44-81521

1 - Mr. Revell
Attn: [redacted]
Room 5131

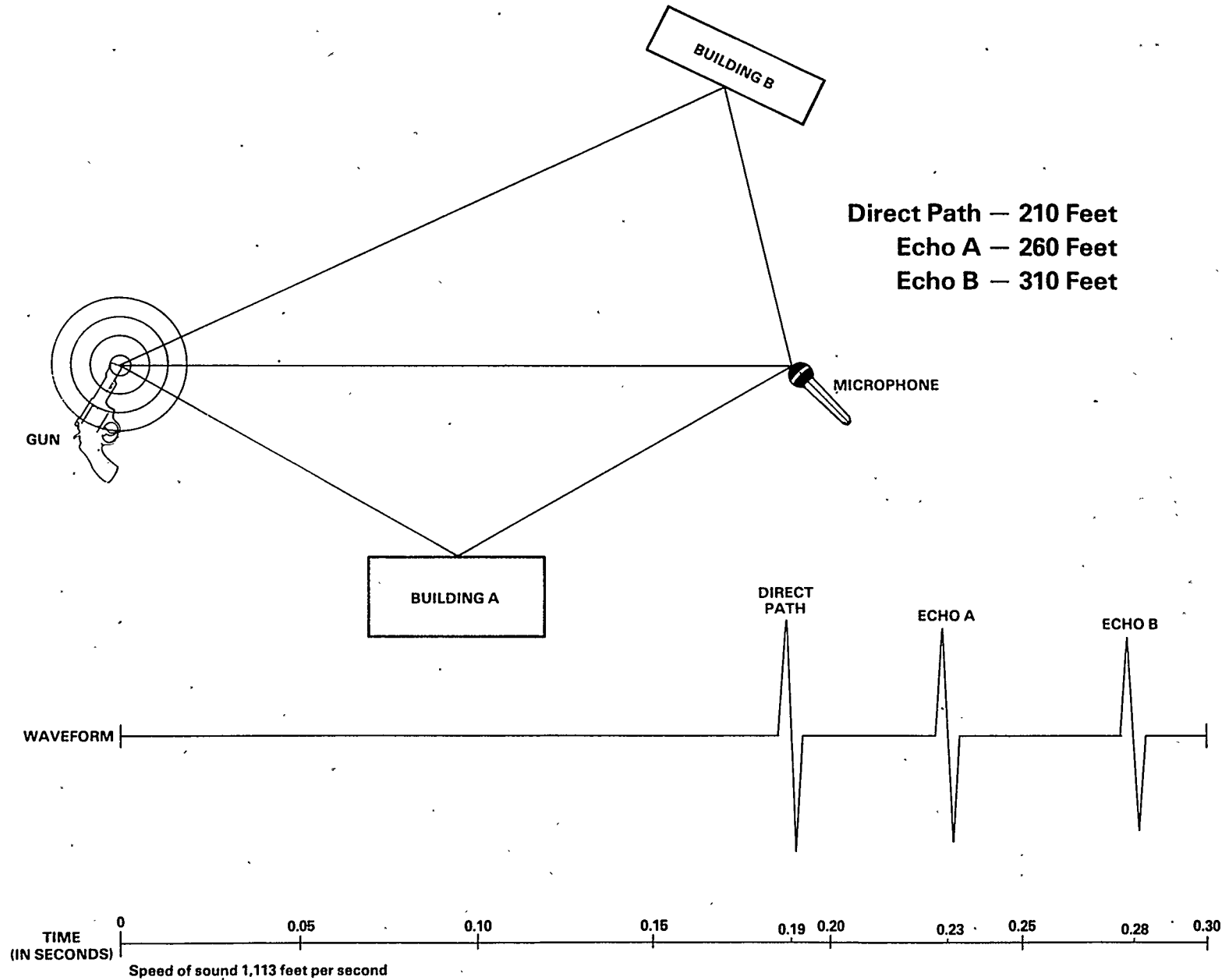
1 - Mr. Geer
Attn: [redacted]
Room 3457

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1 - [redacted]
1 - [redacted]
1 - [redacted]
1 - [redacted]
② - [redacted]

BEK:kk (9)

EXAMPLE OF GUNSHOT ECHO ANALYSIS



UNITED STATES GOVERNMENT

UNITED STATES DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION

Memorandum

(Type or hand print.)

- Assoc. Dir. _____
- Dep. AD Adm. _____
- Dep. AD Inv. _____
- Asst. Dir.:
- Adm. Servs. _____
- Crim. Inv. _____
- Ident. _____
- Intell. _____
- Laboratory _____
- Legal Coun. _____
- Plan. & Insp. _____
- Rec. Mgnt. _____
- Tech. Servs. _____
- Training _____
- Public Affs. Off. _____
- Telephone Rm. _____
- Director's Sec'y _____

b6
b7c

TO : Section Chief
Data Processing Section
Technical Services Division *372*

FROM : SA

DATE: 2/1/84

COMMITMENT REPORT

Section Engineering

SUBJECT: GREENKIL

Examiner/s	OZ		
Symbol/s	2		
Man Workdays			
Date/s	1/29-31/84		
Testified	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No

Bufile # 44-81521
 Court/Agency U.S. District/FBI&DOJ
 City & State Winston-Salem, N.C.

Reason for Appearing in Court but not Testifying: (Circle one)

- 01. Guilty Plea
- 02. Case Continued
- 03. Case Dismissed
- 04. Stipulation
- 05. Testimony not Needed
- 06. Mistrial
- 07. _____

Miscellaneous Commitments: (MC) (Other than Court Appearances - Circle One)

- 01. Lecture/Training (Others)
- 02. Training (Self)
- 03. Speech
- 04. Pretrial Conference
- 05. Field Examination of Evidence
- 06. Research/Data Acquisition
- 07. _____
- 08. Investigative Support
- 09. Communication Support
- 10. Conference/Meeting

Results of Trial Continuing

Prosecuting Attorney et al Defense Attorney et al

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Details/Unusual or Interesting Circumstances:

1- merit pay folder

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UNITED STATES GOVERNMENT

UNITED STATES DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION

Memorandum

(Type or hand print.)

Assoc. Dir. _____
 Dep. AD Adm. _____
 Dep. AD Inv. _____
 Asst. Dir.:
 Adm. Servs. _____
 Crim. Inv. _____
 Ident. _____
 Intell. _____
 Laboratory _____
 Legal Coun. _____
 Plan. & Insp. _____
 Rec. Mgnt. _____
 Tech. Servs. _____
 Training _____
 Public Affs. Off. _____
 Telephone Rm. _____
 Director's Sec'y _____

TO : Section Chief
 Data Processing Section
 Technical Services Division *STK*

FROM : SA

DATE: 2/1/84

COMMITMENT REPORT

Section Engineering

SUBJECT: GREENKIL

b6
b7c

Examiner/s	QZ		
Symbol/s	5		
Man Workdays			
Date/s	1/23-27/84		
Testified	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> Yes	<input type="checkbox"/> Yes
	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No

Bufile # 44-81521
 Court/Agency U.S. District/FBI&DOJ
 City & State Winston-Salem, N.C.

Reason for Appearing in Court but not Testifying: (Circle one)

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- 07. _____

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- 02. Training (Self)
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- 07. _____
- 08. Investigative Support
- 09. Communication Support
- 10. Conference/Meeting

Results of Trial Continuing

Prosecuting Attorney et al Defense Attorney et al

Details/Unusual or Interesting Circumstances:

1- Merit Pay Folder

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b6
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FBI
TECHNICAL SERVICES DIVISION
FEDERAL BUREAU OF INVESTIGATION
WASHINGTON, D. C. 20535

1
I - File (IB046)

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To: SAC, Charlotte (44-3527)

June 8, 1980

From: Director, FBI

FBI FILE NO. 44-81521

LAB. NO. 00107007 E RD

Re: GREENKIL

Examination requested by: SAC, Charlotte
Reference: Evidence receipt dated 1/7/80
Examination requested: Video Tape
Remarks:

Enclosures (2) (2 Technical Services Division Reports)

CEC/amb*
(7)

ADMINISTRATIVE PAGE

Do Not Include Administrative Page Information In Investigative Report

RECORDED
4/21/80
lab

FEDERAL BUREAU OF INVESTIGATION:
UNITED STATES DEPARTMENT OF JUSTICE

Work Sheet

Mr. William E. Swing
Chief of Police
Greensboro, North Carolina

To: Attention:
Staff Services Division

FBI FILE NO. 44-81521

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LAB. NO. 00411060 E QZ

Re: ROLAND WOOD, RAYFORD CAUDLE,
 SUBJECTS;
JAMES WALLER, WILLIAM SAMPSON,
SANDY SMITH, VICTIMS;
CRIMINAL HOMICIDE

YOUR NO. 79-0145368

Examination by:

Examination requested by: Addressee

Reference: Letter dated 3/31/80

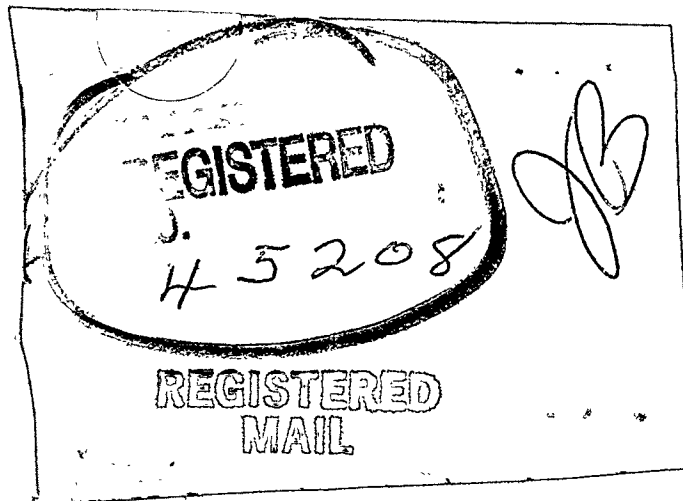
Examination requested: Video Tape - Special Projects Section

Specimens received: 4/11/80

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- ALSO SUBMITTED*
- ~~Q1950 - Q1953~~ Four 8 x 10 black and white photographs
 - ~~Q1954~~ One list of vehicles and vehicle measurements.
 - ~~Q1955~~ One list of vehicles and vehicle measurements for the Exhibit Section, attention .
 - ~~Q1956~~ One list of specific requests concerning gunshots from Channel 11, WTVD, videotape.

4/80 BSE
copy to



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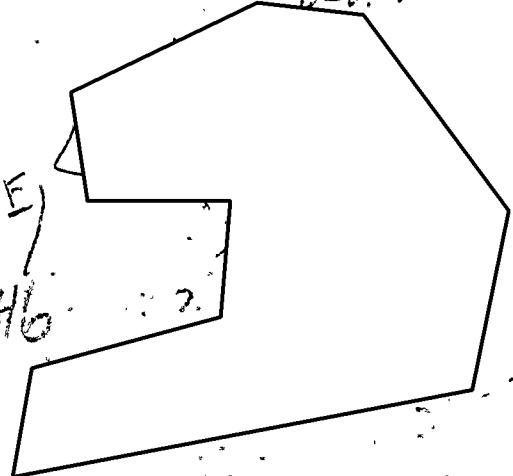
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COMMUNICATIONS SECTION

E/

BH6



CE063 004184SZ

OO HQ

DE CE

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FM CHARLOTTE (44-3527)

TO DIRECTOR (44-81521) IMMEDIATE

BT

UNCLAS

GREENKIL

RE CHARLOTTE TELCALL TO FBI HEADQUARTERS, CIVIL RIGHTS SECTION AND FBI LABORATORY, ON JANUARY 3, 1980.

ARRANGEMENTS HAVE BEEN MADE WITH TV NEWS MEDIA PERSONNEL WHO COVERED THE SHOOTING INCIDENT AT EVERETT AND CARVER STREETS, GREENSBORO, NC, ON NOVEMBER 3, 1979, TO TRAVEL TO THE FBI LABORATORY ON JANUARY 7 AND 9, 1980, TO PRODUCE THE ORIGINAL TAPES FILMED BY THEIR CREWS SO THEY CAN BE COPIED BY THE VIDEO AND SOUND SECTION OF THE FBI LABORATORY.

ON JANUARY 7, 1979, THE FOLLOWING TV NEWS MEDIA PERSONNEL WILL BE AT FBI HQ, WASHINGTON, D.C. - FBI LABORATORY WITH ORIGINAL TAPES:

CHANNEL 8 - ABC AFFILIATE, HIGH POINT, NC, 

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PAGE TWO CE 44-3527 UNCLAS

[] NEWSCASTER; AND [] TV CAMERAMAN. []

[] WILL HAVE CUSTODY OF THE VISUAL TAPES FILMED BY CHANNEL 8 ON NOVEMBER 3, 1979.

CHANNEL 2 - CBS AFFILIATE, GREENSBORO, NC, [] CAMERAMAN. [] WILL BRING ORIGINAL FILMS AND VIDEO TAPES FILMED BY HIM ON NOVEMBER 3, 1979. CHANNEL 2 IS ALSO SENDING UP ADDITIONAL PERSONNEL FOR POSSIBLE INTERVIEW WITH BUREAU OFFICIALS AND LABORATORY OFFICIALS RE FBI INVESTIGATION IN THIS MATTER.

CHANNEL 12 - NCB AFFILIATE, WINSTON-SALEM, NC, [] CAMERAMAN. [] WILL HAVE WITH HIM ORIGINAL FILMS TAKEN BY HIM ON NOVEMBER 3, 1979. [] IS THE CAMERAMAN WHO [] ON THAT DATE.

ON JANUARY 9, 1980, REPRESENTATIVES OF CHANNEL 11, ABC AFFILIATE, DURHAM, NC, WILL COME TO THE FBI LABORATORY: [] NEWSCASTER, AND [] CAMERAMAN. [] WILL HAVE WITH HIM ORIGINAL VIDEO TAPE OF INCIDENT BEING RECORDED AT EVERETT AND CARVER STREET ON NOVEMBER 3, 1979.

ALL OF THE ABOVE TV NEWS REPRESENTATIVES HAVE REQUESTED

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AS [redacted] 1/26/80
PAGE THREE CE 44-3527 UNCLAS

AN INTERVIEW WITH AN FBI OFFICIAL OF THE CIVIL RIGHTS SECTION OR OTHER FBI OFFICIAL WHO COULD BE INTERVIEWED RELATIVE TO THE PRIORITY OF THE INVESTIGATION ASSIGNED BY FBI HQ FOR GREENKIL. INTERVIEW WOULD BE LIMITED TO GENERAL INFORMATION OF THE FBI'S JURISDICTION, AND ALSO OF THE PRIORITIES OF THE INVESTIGATION; AND IT IS NOT EXPECTED ANY QUESTIONS OF SUBSTANCE REGARDING EVIDENTIARY NATURE WILL BE ASKED BY REPORTERS.

REPORTERS HAVE ALSO REQUESTED OPPORTUNITY TO INTERVIEW REPRESENTATIVE OF FBI LABORATORY FOR A GENERAL DISCUSSION OF THE NATURE OF EXAMINATIONS TO BE CONDUCTED AND AGAIN, NO SUBSTANCE OF THE INTERVIEW WILL GO INTO THAT AREA WHICH COULD BE CONSIDERED EVIDENTIARY NATURE. BASICALLY, THESE REPORTERS ARE INTERESTED IN A "SHOW AND TELL" TYPE INTERVIEW AS VERY LITTLE IS KNOWN ABOUT THE FBI'S CAPABILITY IN THE LABORATORY, PARTICULARLY IN AUDIO AND SOUND ANALYSIS.

FBI HQ REQUESTED TO TAKE INTO CONSIDERATION REQUESTS OF THESE TV NEWS MEDIA PERSONNEL FROM THE GREENSBORO, WINSTON-SALEM, HIGH POINT, AND DURHAM AREAS AND IF DEEMED APPROPRIATE, HAVE APPROPRIATE BUREAU OFFICIALS AVAILABLE FOR INTERVIEW ON JANUARY 7 AND 9, 1980.

PAGE FOUR CE 44-3527 UNCLAS

ALSO, ACCOMPANYING THE TV NEWS MEDIA PERSONNEL WILL BE SA [REDACTED] GREENSBORO RA, WHO IS COORDINATING FBI LABORATORY EFFORTS WITH THE STATE INVESTIGATORS, PROSECUTORS, AND NEWS PEOPLE COMING TO WASHINGTON, D.C. STATE PROSECUTOR [REDACTED] DISTRICT ATTORNEY'S OFFICE, GREENSBORO, NC, WILL ALSO BE ARRIVING AT WASHINGTON, D.C. AND FBI HEADQUARTERS ON JANUARY 7, 1979, TO DISCUSS WITH FBI LABORATORY PERSONNEL: SPECIAL PROJECTS, ENGINEERING, AND OTHER RELATED LABORATORY SECTIONS, THE CAPABILITIES OF OUR LABORATORY TO ASSIST THEM IN THEIR PROSECUTION AND TO DEVELOP A MUTUAL UNDERSTANDING OF WHAT THE FBI LABORATORY CAN AFFORD THE STATE PROSECUTORS AND WHAT THE STATE PROSECUTORS ARE LOOKING TO PRESENT IN THE FORM OF EXPERT TESTIMONIES AND PHYSICAL EVIDENCE.

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UACB, SA [REDACTED] WILL TRAVEL TO FBI HQ ON JANUARY 7, 1979, TO COORDINATE THE INTRODUCTION TO FBI LABORATORY FROM TV NEWS MEDIA AND TO COORDINATE THE MEETINGS OF STATE DISTRICT ATTORNEYS AND INVESTIGATOR PERSONNEL WITH FBI HQ AND FBI LABORATORY.

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BT

①
O-CID + Lab

Channel 11 Video Tape.

On 1/9/80 at Quantico under the supervision of SA [redacted] and other video experts (see channel 2 video tape) the channel 11 video tapes were copied onto the left channels of two Nagra SJ (one DC powered and one AC powered) at 15.75, 1/2 track, with the right channel recording time code data from a System Donner model 8154 Time Code Generator (IRAQ B). Each on a 7" reel, 1.5 mil. Q407 has pertinent information.

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On 1/9/80 [redacted] channel 11 cameraman, advised microphone on a 10' cable, usually 5'-6' to the right of camera.

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On 1/9/80 [redacted], News Reporter - Channel 11 advised he was crowded next to cameraman on his right with microphone in hand.

Copy #3 of the channel 11 video tape with time code and channel info (real time) was received from SA [redacted] on 1/21/80. Copy #2 with the same info was received from SA [redacted] on 8/1/80.

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Copy #2 of the channel 11 video tape with time code and channel info (slow motion - 1 frame/second) was received from SA [redacted] on 7/28/80. Put on SA [redacted] desk on 9/5/80.

Channel 2 Video Tape

On 1/7/80 at Building 6 at FBI facilities in Quantico Marine Base, Quantico Va met with FBI employees [redacted], [redacted], and [redacted] in the video tape facilities. Joined by SA [redacted] and TV cameraman [redacted] from WFMV-TV, channel 2, Greensboro, N.C. who had a 3/4" video cassette (Q406). Police officers and state prosecutors from Greensboro, N.C., also present.

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~~that~~
SA [redacted] and the other video experts played back Q406 and provided an unprocessed audio track which I recorded on the left channel of a Nagra SJ^{DC powered} at 15ips, 1/2 track, with the right channel recording time code data from a Sytron Donner model 8154 Time Code Generator (IRAQ B). 7" reel, 1.5 mil.

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[redacted] advised that he was replacing a fuse in his video equipment when the shooting began. He soon thereafter ran back to the front passenger side of vehicle 29 and then almost immediately went behind this car to the back right rear corner. A man with a derringer was also behind vehicle 29 on his left.

Copy #3 of the channel 2 video tape with time code and channel info. (real-time) was received from SA [redacted] on 1/21/80.

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Copy #2 of the channel 2 video tape with time code and channel info. (slow motion - 1 frame/second) was received from SA [redacted] on 7/25/80. Put on SA [redacted] desk on 9/5/80.

Channel 8 Film

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On 1/8/80, SA [] played back the original film recording from channel 8, and SA [] copied it onto a Nagra 55 (left channel) at 15ips with the right channel having time code information from a System Donner model 8154 Time Code Generator (TRAQB) onto a 7" reel, 1.0 mil, 1/2 track stereo.

On 1/8/80, []^{TV} cameraman for channel 8, WGHP, High Point, N.C., stated in the street on the south side of the intersection of Carver Court and Everett Street when the shooting started. He then ran to behind vehicle 30 and started filming at the right rear corner. His microphone is attached to the camera.

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On 1/8/80, newscaster [] could not add any additional information on camera location.

Copy # 3 of the channel 8 film on video cassette with time code and channel info (real time) was received from SA [] on 1/21/80 and returned to him on 7/2/80. Copy # 2 of the same info. was received from SA [] on 7/2/80.

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Copy # 2 of the channel 8 film on a video cassette with time code and channel info (slow motion - 1 frame/second) was received from SA [] on 7/28/80. Put on SA [] desk on 9/5/80.

Channel 12 Video Tape

No copies of soundtrack made since camera was not on during shooting.

On 1/7/80, [redacted], former reporter for Channel 12-TV, Winston-Salem, N.C. stated that the cameraman was approximately 2'-3' in front of news car before shooting. When shooting started, the cameraman and [redacted] crawled under news car.

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Copy #3 of the Channel 12 video tape with time code & channel info (real time) received from SA [redacted] on 1/21/80.

Equipment Used:

Visual: Videocassette copies played back on a Sony VO-2600 Videocassette Recorder and a JVC Color Monitor, model 7830CM

Visicorder: Honeywell ~~2112~~ 2112, Dual Channel, 12" paper, 500 cm/sec and 50 cm/sec, time code on channel 2 of records off Nagra SJ recordings from soundtracks. Honeywell 8106A, single channel 6" paper, 250 cm/sec and 25 cm/sec. Kodak Lunagraph Direct Print Paper, types 2167, 1895, and 2295

Audio: Nagra SJ recordings from soundtracks played back on a Revox A700, 1/2 track left, 15 ips and 1 7/8 ips, Beyer DT 480 headphones used.

Analysis: Used a 1" to 5' scale map, aerial photo blow-ups (40" x 60" or larger), vehicle list provided by Greensboro, P.D., vehicle placed on map by planimeter (CSA [redacted]), 8' long aluminum straightedge, 10' tape measure in mm's, 61 cm calibrated rule in 1/2 mm's, several protractors, various drafting equipment, specially built wire holders, clear plastic overlay of map, and writing pens of different colors

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Equipment Specifications:b6
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1. Nagra TV SJ

On 6/11/80, according to Nagra Engineer [redacted]
the speed error at 15 ips is:

Typical .05% P-P
Max .07% P-P
RMS .028%

2. BVM-100 Video Recorder, Sony Corp (used by Channel 11 according to [redacted]).

According to [redacted] Video Engineer, Sony ~~Corp~~ Broadcasting Service (NY) (212-361-8600) ~~stated~~ that speed error at 3³/₄ ips is ~~not~~

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0.2 cm short run (under 10 cm of tape) - start up
0.0 cm over 10 cm of tape or longer
less than .25% RMS (W & F)
less than .024 cm/sec velocity error

3. JVC-4400 Video Record, JVC (used by Channel 2 according to [redacted]).

According to [redacted], Field Service Engineer, JVC, N.Y. (212-476-8300, [redacted]) ~~stated~~ that speed error at 3³/₄ ips is

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b7C

RMS (W & F) less than .25%
Velocity error ~~not~~ less than .024 cm/sec.

4. Sony VO-2850 Video recorder (Playback for channels 11 & 2 at Quantis)

According to Electronic Technician [redacted] Senior TV Engineer, Quantis ad [redacted] (referred to under # 2 above) ~~stated~~ the speed error is

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RMS (W & F) less than 0.2% RMS
Velocity error less than 0.19 cm/sec.

Equipment Specifications:

5. Rockland 5100 Programmable Freq Synthesizer according to manual has .001 Hz resolution across entire range, at 500 Hz = ~~.0002~~ .0002% error max

6. Honeywell 2112 Versicodes at 500 cm/sec adjusted to less than .05% speed error

7. Rexox A700 according to manual

Weighted Peak Flutter $< \pm .06\%$ at 15 ips.
 $< \pm .1\%$ at 3 3/4 ips

Visicorder Copies Prepared:

At 25 cm/sec (6" paper) (Q407)

1. Pertinent portion of channel 11 (from before transit 1 to after last gunshot)
2. Pertinent portion of channel 2 (from before transit 1 to after last gunshot) - not same as transit 1 on channel 11.
3. Pertinent portion of channel 8 (from before 1st gunshot to after last gunshot)
4. Rapid fire test of 0.357 finger revolver
5. Dry fire test of " " "

At 50 cm/sec (12" paper)

1. Pertinent portion of channel 11 (Q407) - from before transit 1 to after last gunshot (time-code info on other channel)
2. Pertinent portion of channel 2 - from before transit 1 (on channel 2) to after last gunshot (time-code info on other channel)

At 250 cm/sec (6" paper)

1. All gunshots of suspected gunshots on channel 11 (Q407)
2. All gunshots of suspected gunshots on channel 2

At 500 cm/sec (12" paper)

1. All gunshots of suspected gunshots on channel 11 (Q407)
2. All gunshots of suspected gunshots on channel 2
3. All gunshots of weapons tests at Quantico.

Speed of Sound Determination:

On 6/6/80 [redacted] Greensboro, N.C. Police Department advised telephonically that the National Weather Service in Greensboro, N.C. recorded the following temperatures and barometric pressures on 11/3/79:

b6
b7c

11:00 am - 54°F , BP 30.04

12:00 noon - 56°F , BP 30.04

Shots occurred at approximately 11:30 am.

Table 1-1 "Properties of Dry Air at Atmospheric Pressure - English Units" in ^{CRC} Handbook of table for Applied Engineering Science, 2nd Edition (1973) page 9 states the following:

$53^{\circ}\text{F} \Rightarrow$ speed of sound = 1111 ft/sec

$62^{\circ}\text{F} \Rightarrow$ " " " = 1120 ft/sec

Calculating for $55^{\circ}\text{F} = 1113 \text{ ft/sec}$

For a 50°F to 60°F range ≈ 1108 to 1118 ft/sec

Since maximum echo distance used was less than 170 feet, even with a $\pm 5^{\circ}\text{F}$ temperature distance the maximum error is ± 0.75 feet.

CRC HANDBOOK
of tables for
**APPLIED
ENGINEERING
SCIENCE**

SECOND EDITION

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Published by

CRC Press, Inc.

18901 Cranwood Parkway • Cleveland, Ohio 44128

**Table 1-1. PROPERTIES OF DRY AIR
AT ATMOSPHERIC PRESSURE—ENGLISH UNITS***

For properties of dry air in SI units, see Table 1-2.

SYMBOLS AND UNITS:

$^{\circ}\text{K}$ = degrees Kelvin

$^{\circ}\text{R}$ = degrees Rankine

$^{\circ}\text{F}$ = degrees Fahrenheit

ρ = density, lb_m/ft^3

c_p = specific heat capacity,
 $\text{Btu}/\text{lb}_m^{\circ}\text{R} = \text{cal}/\text{g}^{\circ}\text{K}$

c_p/c_v = specific heat capacity, ratio dimensionless

μ = viscosity: For $\text{lb}_m/\text{sec ft}$ multiply by 10^{-4}

k = thermal conductivity, $\text{Btu}/\text{hr ft}^{\circ}\text{R}$

Pr = Prandtl number, dimensionless

h = enthalpy, Btu/lb_m . For cal/g multiply by 0.5555.

V_s = sound velocity, ft/sec

Temperature			Properties							
$^{\circ}\text{K}$	$^{\circ}\text{R}$	$^{\circ}\text{F}$	ρ	c_p	c_p/c_v	μ	k	Pr	h	V_s
100	180	-280	.2247	.2456		.0466	.00534	.770	42.3	651
110	198	-262	.2033	.2440	1.4202	.0513	.00586	.768	46.7	685
120	216	-244	.1858	.2430	1.4166	.0559	.00638	.766	51.1	717
130	234	-226	.1711	.2423	1.4139	.0604	.00690	.763	55.5	747
140	252	-208	.1586	.2418	1.4119	.0648	.00742	.761	59.8	776
150	270	-190	.1478	.2414	1.4102	.0691	.00793	.758	64.2	804
160	288	-172	.1384	.2411	1.4089	.0733	.00844	.754	68.5	831
170	306	-154	.1301	.2408	1.4079	.0774	.00895	.750	72.9	856
180	324	-136	.1228	.2406	1.4071	.0815	.00946	.746	77.2	882
190	342	-118	.1163	.2405	1.4064	.0854	.00996	.743	81.5	906
200	360	-100	.1104	.2404	1.4057	.0892	.01045	.739	85.8	930
205	369	-91	.1078	.2403	1.4055	.0911	.01070	.738	88.0	941
210	378	-82	.1051	.2403	1.4053	.0930	.01095	.736	90.2	953
215	387	-73	.1027	.2403	1.4050	.0949	.01119	.734	92.3	964
220	396	-64	.1003	.2402	1.4048	.0967	.01143	.732	94.5	976
225	405	-55	.0981	.2402	1.4046	.0986	.01168	.731	96.7	987
230	414	-46	.0959	.2402	1.4044	.1004	.01191	.729	98.8	998
235	423	-37	.0939	.2402	1.4042	.1022	.01215	.727	101.0	1008
240	432	-28	.0919	.2401	1.4040	.1039	.01239	.725	103.1	1019
245	441	-19	.0901	.2401	1.4038	.1057	.01263	.724	105.3	1030
250	450	-10	.0882	.2401	1.4036	.1074	.01287	.722	107.5	1040
255.4	459.7	0	.0865	.2401	1.4034	.1092	.01310	.721	109.6	1051
260	468	8	.0848	.2401	1.4032	.1109	.01334	.719	111.8	1061
265	477	17	.0832	.2402	1.4030	.1126	.01357	.717	114.0	1071
270	486	26	.0817	.2402	1.4029	.1143	.01380	.716	116.1	1081
275	495	35	.0802	.2402	1.4026	.1160	.01403	.715	118.3	1091
280	504	44	.0787	.2402	1.4024	.1176	.01426	.713	120.4	1101
285	513	53	.0774	.2402	1.4022	.1192	.01448	.711	122.6	1111
290	522	62	.0760	.2403	1.4020	.1208	.01472	.710	124.8	1120
295	531	71	.0747	.2403	1.4018	.1224	.01494	.709	126.9	1130
300	540	80	.0735	.2404	1.4017	.1241	.01516	.708	129.1	1140
305	549	89	.0723	.2404	1.4015	.1257	.01539	.707	131.3	1149
310	558	98	.0711	.2405	1.4013	.1272	.01561	.705	133.4	1158
315	567	107	.0700	.2405	1.4010	.1287	.01583	.704	135.6	1167
320	576	116	.0689	.2406	1.4008	.1303	.01606	.703	137.7	1177
325	585	125	.0678	.2407	1.4006	.1319	.01627	.702	139.9	1186
330	594	134	.0668	.2407	1.4004	.1334	.01649	.701	142.1	1195
335	603	143	.0658	.2408	1.4001	.1349	.01670	.700	144.2	1204
340	612	152	.0648	.2409	1.3999	.1364	.01692	.699	146.4	1213
345	621	161	.0639	.2410	1.3996	.1379	.01713	.698	148.6	1221

Rapid Fire Test (3/18/80)

The following tests were recorded on a Nagra 4.2, full track at 15 ips in LN position onto 7" reel, 1.5 mil, Anger 632 tape. Used at 1/4" microphone on a Bruel & Kjaer "Impulse Precision Precision Sound Level Meter" Type 2209, with ranges set at 120 attenuation and 110 amplification, filter set "A" weighting, impulse set at "fast", set by SA [redacted]

b6
b7c

Microphone set at 5' vertical height, pointed straight up, approximately 20' directly behind slotted. Tests 1-8 used a 38 special S & W Model 10-4" barrel. Ammo -> 158 standard load ammo and 158 grain "+P" load. Tests 9-16 same except 6" barrel used.

Test 1 - fired by [redacted], firearms technician, fired six slots as fast as possible, double action, point shoulder position, with standard load ammo.

b6
b7c

Test 2 - fired by SA [redacted], firearms examiner, fired six slots as fast as possible, double action, point shoulder position, with standard load ammo.

Test 3 - same as test 1

Test 4 - same as test 2, except one misfire

Test 5 - same as test 2, except "+P" ammo used

Test 6 - same as test 1, except "+P" ammo used and off hand position

Test 7 - same as test 2, except "+P" ammo used, off hand position, and one misfire.

Test 8 - Same as test 2, except "+P" ammo used and off hand position

Test 9 - fired by SA Unit Chief [redacted], firearms expert, fired six slots as fast as possible, double action, point shoulder position, with "+P" ammo.

b6
b7c

Test 10 - same as test 9.

Rapid Fire Test - continued.

Test 11 - same as test 1.

Test 12 - same as test 1.

Test 13 - same as test 1 except fired firearms technician

b6

b7c

Test 14 - same as test 13 except "+P" ammo used

Test 15 - same as test 9 except standard load ammo.

Test 16 - same as test 15

Visicorder results: 25 cm/sec

Tests 2 - see attached

Results:

Fastest Time: Test 4, 3 slots in 0.486 second

Slowest Time: Test 13, 3 slots in 0.696 second

Gushots 16, 17 and 18 in 0.768 second

On 3/18/80, Greensboro PD advised that white female in yellow raincoat bought a model 10 S&W the day prior to incident, barrel length unknown.

Results visicorder 25 cm/sec

T1 - Shots 1-3 = 15.2 cm = .608 sec
" 2-4 = 15.3 cm = .612 "
" 3-5 = 15.65 cm = .626 "
" 4-6 = 16.05 cm = .642 "

T2 - Shots 1-3 = 14.15 cm = .566 sec
" 2-4 = 14.2 " = .568 "
" 3-5 = 13.75 " = .550 "
" 4-6 = 14.1 " = .564 "

T3 - Shots 1-3 = 14.3 Cm = .572 sec.
 " 2-4 = 14.85 " = .594 "
 " 3-5 = 15.1 " = .604 "
 " 4-6 = 14.9 " = .596 "

T-4 - Shot 1-3 = N/A Cm = _____ sec.
 " 2-4 = N/A " = _____ "
 " 3-5 = N/A " = _____ "
 " 4-6 = 12.15 " = .486 "

(Misfire on Shot #3)

T5 - Shot 1-3 = 12.85 Cm = .514 sec.
 " 2-4 = 13.5 " = .540 "
 " 3-5 = 13.25 " = .530 "
 " 4-6 = 12.75 " = .510 "

T6 - Shot 1-3 = 15.15 Cm = .606 sec.
 " 2-4 = 14.6 " = .584 "
 " 3-5 = 14.55 " = .582 "
 " 4-6 = 14.65 " = .586 "

T7 - Shot 1-3 = N/A Cm = _____ sec.
 " 2-4 = N/A " = _____ "
 " 3-5 = 13.5 " = .540 "
 " 4-6 = 12.45 " = .498 "

(Misfire on Shot #2)

T-8 - Shot 1-3 = 13.05 cm = .522 sec.
" 2-4 = 13 " = .520 "
" 3-5 = 12.55 " = .502 "
" 4-6 = 12.95 " = .518 "

T-9 Shot 1-3 = 17.35 cm = .694 sec.
" 2-4 = 17.1 " = .684 "
" 3-5 = 17 " = .680 "
" 4-6 = 16.55 " = .662 "

Test 10 Shot 1-3 = 15.6 cm = .624 sec.
" 2-4 = 15.6 " = .624 "
" 3-5 = 15.4 " = .616 "
" 4-6 = 15.2 " = .608 "

Test 11 Shot 1-3 = 15.6 cm = .624 sec.
" 2-4 = 14.95 " = .598 "
" 3-5 = 15.05 " = .602 "
" 4-6 = 15.85 " = .634 "

Test 12 Shot 1-3 = 14.4 cm = .576 sec.
" 2-4 = 14.5 " = .580 "
" 3-5 = 14.55 " = .582 "
" 4-6 = 14.6 " = .584 "

<u>Test 13</u> - Shot	1-3 = 17.4	cm = 696	sec.
"	2-4 = 16.55	" = 662	"
"	3-5 = 17.05	" = 682	"
"	4-6 = 17.1	" = 684	"

<u>Test 14</u> - Shot	1-3 = 15.6	cm = 624	sec.
"	2-4 = 16.2	" = 648	"
"	3-5 = 16.1	" = 644	"
"	4-6 = 16.2	" = 648	"

<u>Test 15</u> - Shot	1-3 = 14.9	cm = 596	sec.
"	2-4 = 15.1	" = 604	"
"	3-5 = 14.2	" = 568	"
"	4-6 = 14	" = 560	"

<u>Test 16</u> - Shot	1-3 = 14.3	cm = 572	sec.
"	2-4 = 13.85	" = 554	"
"	3-5 = 14.	" = 560	"
"	4-6 = 14.15	" = 566	"

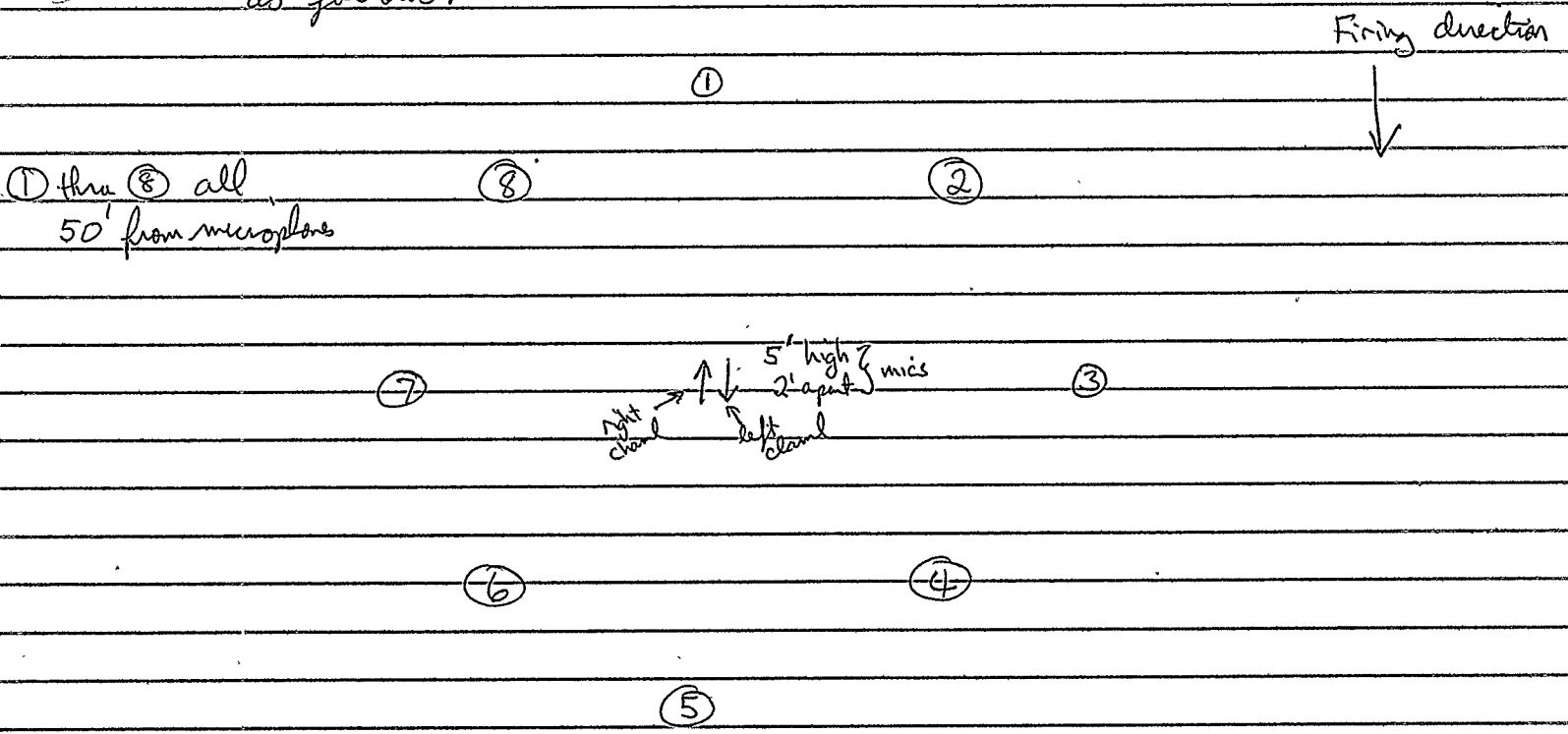
Quantico Test Shots

On 7/14/80, SA's [redacted] and [redacted] fired the following weapons at the Quantico Rifle Range:

b6
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1. 12 gauge Remington Model 870 Pump Shotgun, shells are 2 3/4" Mag 00 Buck Federal
2. 20 gauge Remington Model 870 Pump Shotgun, shells are 2 3/4" Western Super X Max Load, 1oz 5 shot
3. AR-180 Armalite ^{ppl} shells are 223 Remington-Western Super X 52 grain High Velocity.
4. Ruger Security ^{S&W} 1357 Magnum ~~revolver~~ revolver, 6 slot, shells .357 Mag, 158 grain, Western Super X
5. Smith & Wesson Model 10-4 revolver, 6 slot, shells 38 special 158 grain ^{+P} Hollow Point, Western Super X
6. Ruger ^{Antelope} Standard 22 pistol (Long Rifle), shells Federal 22 High Power long rifle.

For tests #1-6 the microphones at the firing positions were as follows:



Beam

Quantis Test Shots

For tests #7-12 the microphones and the firing positions same as test #1-6 except microphones turned 90° so that right channel mic toward ⑦ and left channel mic toward ③.

Recorded on both channels of a Nagra IV-S set at 95dB, 15ips, 1/2 track stereo, 7" reels, 1.0 ml. 80°-90°F, Winds calm to moderate

- Test #1 - weapon #1 fired in all firing positions
- Test #2 - weapon #2 " " " " "
- Test #3 - weapon #3 " " " " "
- Test #4 - weapon #4 " " " " "
- Test #5 - weapon #5 " " " " "
- Test #6 - weapon #6 " " " " "
- Test #7 - weapon #1 " " " " "
- Test #8 - weapon #2 " " " " "
- Test #9 - weapon #3 " " " " "
- Test #10 - weapon #4 " " " " "
- Test #11 - weapon #5 " " " " "
- Test #12 - weapon #6 " " " " "

All the test shots were then run at 500 cm/sec on the Honeywell 2112 dual channel recorder. Comparison were then made with unknown gunshot.

Error Calculation - Muzzle Blast & Microphone Locations

Most (99% or better) of the echoes used for measurement traveled 80 feet or less farther than the main muzzle blast (typical situation), however a few traveled as much as 170 feet. The temperature is most likely accurate to within $\pm 1^\circ\text{F}$ however $\pm 5^\circ\text{F}$ was taken as a maximum range.

<u>Error Factor</u>	<u>Max Error Possible</u>	<u>Max Error Expected</u>
1. Ambient Temperature:	± 0.75 feet	± 0.07 feet
2. Video Recorder at scene	± 0.42 feet	± 0.20 feet
3. Play back on video recorder at Quantico	± 0.34 feet	± 0.16 feet
4. Nagra recorder playback and recorder	± 0.12 feet	± 0.04 feet
5. Visiorder	± 0.08 feet	± 0.04 feet
6. Echo Measurement ($\pm .025$ cm)	± 0.05 feet	± 0.02 feet
7. Map Measurement ($\pm .025$ cm)	± 0.05 feet	± 0.02 feet
Total error	± 1.81 feet	± 0.55 feet

Error Calculation - Absolute Times

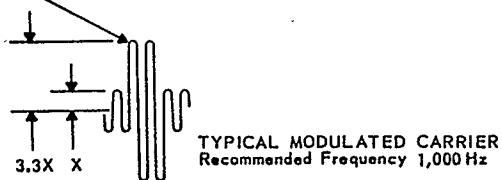
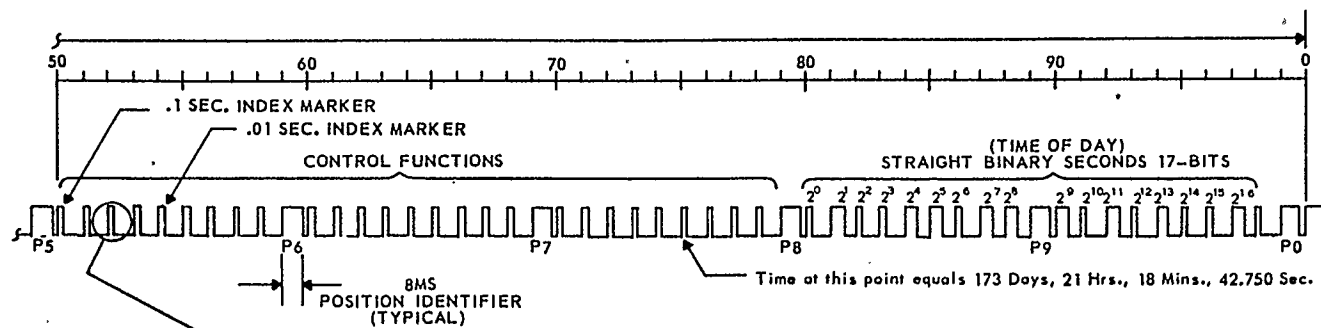
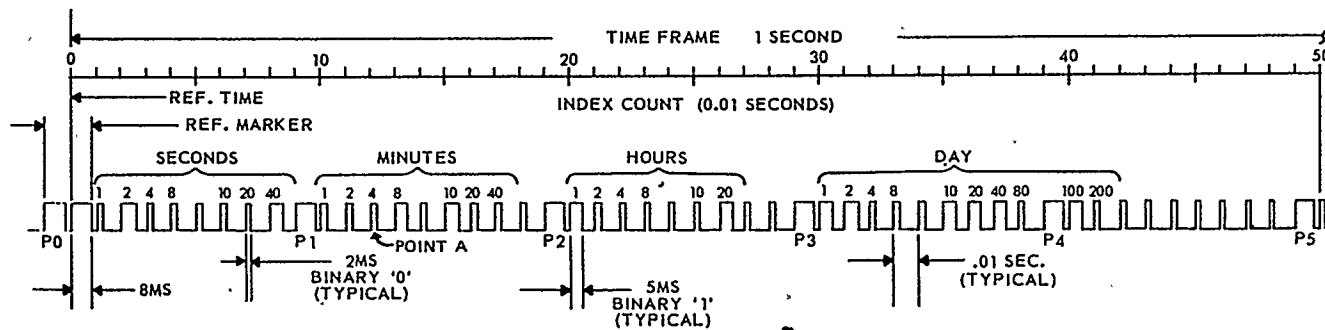
<u>Error Factor</u>	<u>Max Possible Error</u> ($\pm 5^\circ\text{F}$) $\pm 0.45\%$	<u>Max Expected Error</u> ($\pm 1^\circ\text{F}$) $\pm 0.09\%$
1. Ambient Temperature		
2. Video Recorders at scene	$\pm 0.25\%$	$\pm 0.20\%$
3. Play back on video recorder at Quantico	$\pm 0.20\%$	$\pm 0.15\%$
4. Time Code Generator Error	Neagl.	Neagl.
5. Measurement Error	$\pm 0.20\%$	$\pm 0.05\%$
	Total Error $\pm 1.10\%$	$\pm 0.49\%$

SYSTRON-DONNER

**TIMING
REFERENCE
HANDBOOK**

IRIG FORMAT "B"

1. TIME: Universal Time
2. TIME FRAME: 1.0 Second
3. CODE DIGIT WEIGHTING OPTIONS: *BCD, SB or both:*
 - a. Binary Coded Decimal time-of-year *Code Word* – 30 binary digits
 - (1) Seconds, minutes, hours and days
 - (2) Recycles each 24 hours
4. *Code Word* structure:
 - a. *BCD*: Word begins at *Index Count 1*. Binary coded Elements occur between *Position Identifier Elements* (7 for seconds, 7 for minutes; 6 for hours; 8 and 2 for days) until the *Code Word* is complete. An *Index Marker* occurs between decimal digits in each group to provide separation for visual resolution.
 - b. *SB*: Word begins at *Index Count 80*. Five decimal digits (17 binary coded elements) occur with a *Position Identifier* between the 9th and 10th binary coded elements.
5. Least significant digit occurs first.
6. ELEMENT RATES AVAILABLE:
 - a. 100 per second (basic Element rate)
 - b. 10 per second
 - c. 1 second
7. ELEMENT IDENTIFICATION:
 - a. "On time" reference point for all Elements is the leading edge.
 - b. Index Marker 2 milliseconds
(Binary Zero or uncoded Element)
 - c. Code Digit 5 milliseconds
(Binary One)
 - d. Position Identifier 8 milliseconds
(Refers to the leading edge of the succeeding Element)
 - e. Reference Marker – 1 per second. Two consecutive
Position Identifiers
(The "on time" point, to which the *Code Word* refers, is the leading edge of the second *Position Identifier*.)
8. RESOLUTION: 10 milliseconds (unmodulated)
1 millisecond (modulated)
9. CARRIER FREQUENCY: 1 kHz when modulated



IRIG STANDARD TIME CODE
FORMAT 'B'
(100 pps Code)
Reference IRIG Document 104-70

IDENTIFICATION +
DIMENSIONS OF VEHICLES

①

00411060EQZ

#1. 1977 FORD PICK-UP TRUCK, COLOR TAN

N.C. LIC. #

LENGTH: 19' 8" WIDTH: 6' 7"

b6
b7C

#2. 1969 CHEVROLET STATION WAGON, WHITE WITH WOOD TRIM

N.C. LIC. #

LENGTH: 19' 6" WIDTH: 6' 6"

#3. 1972 PONTIAC 2 DOOR, REBEL FLAG TAG ON FRONT, COLOR GREEN

N.C. LIC. #

LENGTH: 18' 6" WIDTH: 6' 5"

b6
b7C

#4. 1977 FORD PICK-UP TRUCK, COLOR LT. BLUE + WHITE

N.C. LIC. #

LENGTH: 16' 2" WIDTH: 6' 7"

#5. 1968 BUICK ELECTRA 225, 4 DOOR, BLACK / WHITE

N.C. LIC. #

LENGTH: 18' 5" WIDTH: 6' 4"

#6. 1977 FORD LTD, 4 DOOR, BROWN / TAN

N.C. LIC. #

LENGTH: 18' 7" WIDTH: 6' 3"

b6
b7C

#7. 1976 DODGE CORONET, 4 DOOR, DARK GREEN / WHITE

N.C. LIC. #

LENGTH: 17' 9" WIDTH: 6' 1"

00411060EPZ

2

#8, 1974 FORD PICK-UP TRUCK, COLOR BLACK

N.C. LIC. # [REDACTED]

b6
b7c

LENGTH: 19' 8" WIDTH: 6' 7"

#9, 1962 FORD FAIRLANE 2 DOOR, LIGHT BLUE

N.C. LIC. # [REDACTED]

LENGTH: 16' 3" WIDTH: 5' 10"

#10, 1976 FORD ECONOLINE VAN, COLOR YELLOW

N.C. LIC. # [REDACTED]

LENGTH: 17' 10" WIDTH: 6' 2"

#11, 1975 CHEVROLET SCHOOL BUS, COLOR ORANGE

N.C. LIC. # [REDACTED]

LENGTH: 28' 10" WIDTH: 7' 11"

b6
b7c

#12, 1976 DODGE STATION WAGON, COLOR DARK RED

N.C. LIC. # [REDACTED]

LENGTH: 16' 2" WIDTH: 5' 10"

#13, 1970 PLYMOUTH 4 DOOR, COLOR BROWN

N.C. LIC. # [REDACTED]

LENGTH: 17' 11" WIDTH: 6' 8"

#14, 1976 PLYMOUTH 4 DOOR, COLOR GREEN

N.C. LIC. # [REDACTED]

LENGTH: 16' WIDTH: 5' 10"

00411060EQZ

3

#15, 1973 TOYOTA PICK-UP WITH CAMPER, YELLOW & WHITE

N.C. LIC. # [REDACTED]

b6
b7c

LENGTH: 13'4" WIDTH: 5'4"

#16, 1980 FORD FAIRMONT STATION WAGON, COLOR WHITE

N.C. LIC. # [REDACTED]

LENGTH: 16' 3 1/2" WIDTH: 5'11"

#17, 1973 DODGE 2 DR., COLOR BIEGE / WHITE

N.C. LIC. # [REDACTED]

LENGTH: 17' WIDTH: 5'10"

#18, 1970 PLYMOUTH 4 DOOR, COLOR BROWN

N.C. LIC. # [REDACTED]

LENGTH: 17'11" WIDTH: 6'8"

#19, 1971 FORD CUSTOM PICK UP WITH CAMPER, COLOR GREEN & WHITE

N.C. LIC. # [REDACTED]

b6
b7c

LENGTH: 17'8" WIDTH: 6'7"

#20, 1976 HONDA CVCC, COLOR METALLIC BLUE

N.C. LIC. # [REDACTED]

LENGTH: 11'5" WIDTH: 4'9"

#21, 1972 FORD PINTO 2 DOOR, COLOR GREEN

N.C. LIC. # [REDACTED]

LENGTH: 12'2" WIDTH: 5'7"

00411060 EQZ

4

#22, 1974 GREMLIN X COLOR BLACK WITH GOLD STRIPE b6

N.C. LIC. # b7C

LENGTH: 14' WIDTH: 5'6"

#23, 1971 FORD TORINO, 2 DOOR, COLOR WHITE

NO TAGS

LENGTH: 16'4" WIDTH: 6'

#24, 1971 GMC VAN COLOR WHITE

LIC. # b6

LENGTH _____ WIDTH _____ b7C

#25, 1979 FORD PINTO 2 DOOR, COLOR WHITE

N.C. LIC. #

LENGTH: 14' WIDTH: 5'5"

#26, 1978 CHEVROLET 2 DOOR, COLOR CREAM

N.C. LIC. #

LENGTH: 16'4" WIDTH: 5'8" b6

#27, 1976 FORD GRANADA, 4 DOOR, WHITE WITH ORANGE LETTERING b7C

N.C. LIC. #

LENGTH: 16'6" WIDTH: 6'

#28, 1979 CHEVROLET BLAZER S/W TYPE TRUCK, COLOR WHITE/^{medium}~~dark~~ BLUE

N.C. LIC. #

LENGTH: 15'4 1/8" WIDTH: 6'7"

00411060EQZ

5

#29. 1971 BUICK ELECTRA 225, 4 DOOR, BLACK / GREY
N.C. Lic. # [REDACTED]

LENGTH: 18' 2" WIDTH: 6' 5"

b6
b7C

#30. 1972 FORD TORINO 2 DOOR, COLOR BLACK / BROWN
N.C. Lic. # [REDACTED]

LENGTH: 17' 1" WIDTH: 6' 2"

#31. 1969 CHEVROLET VAN, COLOR LIGHT BLUE
NO TAGS

LENGTH: 13' 10" WIDTH: 6'

#32. 1972 SUBARU, 2 DOOR, ORANGE WITH BLUE DOOR ON LEFT
N.C. Lic. # [REDACTED]

LENGTH: 12' 11" WIDTH: 4' 9 1/2"

b6
b7C

#33. UNIDENTIFIED VEHICLE, POSSIBLY A 1968 CHEVROLET
4 DOOR. Length & width unknown

#34. 1979 FORD FLAT BED DUMP TRUCK, YELLOW CAB, BLACK BED.
N.C. Lic. # [REDACTED]

LENGTH: 22' 6" WIDTH: 8'

b6
b7C

#35. 1970 JAVELIN, COLOR WHITE WITH RED STRIPES
N.C. Lic. # [REDACTED]

LENGTH: 15' 7" WIDTH: 5' 8"

00411060EPZ

#36. UNKNOWN VEHICLE. Poss 1973 Dodge Polara, color green, length + width unknown.

#37. 1970 FORD F-100 PICK UP WITH CAMPER SHELL, YELLOW + WHITE, N.C. LIC. # [redacted] LENGTH: 17'5" WIDTH: 6'7 1/2"

#38. 1973 CHRYSLER 4 DOOR, BLACK / LIGHT YELLOW N.C. LIC. # [redacted] LENGTH: 18'6" WIDTH: 6'6"

b6
b7C

#39. 1977 OLDS CUTLASS SUPREME, BIEGE / DARK BROWN N.C. LIC. # [redacted] LENGTH: 17'1" WIDTH: 5'10"

#40. 1973 CHEV. MONTE CARLO, 2 DOOR, COLOR BIEGE / WHITE N.C. LIC. # [redacted] LENGTH: 17'2" WIDTH: 6'3"

b6
b7C

#41. 1970 Chev. Pick-up truck WITH CAMPER, COLOR WHITE + DARK BLUE N.C. LIC. # [redacted] LENGTH: 17'1" WIDTH: 6'6"

#42. 1975 PONTIAC 2 DOOR, COLOR SILVER N.C. LIC. # [redacted] LENGTH: 18'11" WIDTH: 6'5"

00411060EPZ

7

#43. 1973 CHEVROLET, 4 DOOR, COLOR BLACK.

N.C. Lic. #

b6
b7c

LENGTH: 18'2"

WIDTH: 6'4"

#44. 1971 DODGE 4 DOOR, DANIEL KECK TAXI, WHITE + GREEN

N.C. Lic. #

Does not enter Diagram Area, not measured.

#45. 1976 DODGE, 4 DOOR, COLOR WHITE / ORANGE

N.C. Lic. #

LENGTH: 18'4"

WIDTH: 6'7"

#46. 1964 CHEVROLET PICK-UP TRUCK, COLOR WHITE / GREEN

N.C. Lic. #

b6
b7c

LENGTH: 15'7"

WIDTH: 6'7"

#47. 1971 FORD 4 DOOR, COLOR WHITE / UNK. DARK COLOR.

N.C. Lic. #

Does not enter Diagram Area, not measured.

#48. 1973 CHEVROLET 2 DOOR, COLOR BLACK

N.C. Lic. #

LENGTH: 18'4"

WIDTH: 6'5"

#49. 1975 FORD GRANADA 4 DOOR, COLOR DARK BLUE / LIGHT BLUE

N.C. Lic. #

LENGTH: 16'6"

WIDTH: 6'2"

(NOT POSITIVELY IDENTIFIED AT THIS TIME.)

00411060EQZ

8

#50. UNIDENTIFIED VEHICLE.

#51. 1975 FORD PICK-UP TRUCK w/ CAMPER, COLOR BROWN WITH ^{orange &} white trim

N.C. LIC. # [REDACTED]

LENGTH: 17' 11" WIDTH: 6' 5"

b6
b7c

#52. 1978 CHEVROLET NOVA 4 DOOR, COLOR DARK GREEN

N.C. LIC. # [REDACTED]

LENGTH: 16' 2" WIDTH: 5' 7"

(POLICE CAR)

#53. 1977 CHEVROLET 2 DOOR, COLOR BEIGE

N.C. LIC. # [REDACTED]

LENGTH: 17' 2" WIDTH: 6' 1"

(POLICE CAR)

#54. 1974 CHEVROLET, UNITED TAXI, WHITE / BLACK

N.C. LIC. # [REDACTED]

LENGTH: 18' 3" WIDTH: 6' 7"

b6
b7c

#55. 1962 FORD 4 DOOR, COLOR WHITE / RED

N.C. LIC. # [REDACTED]

~~is~~ Does not enter diagram Area, Not measured

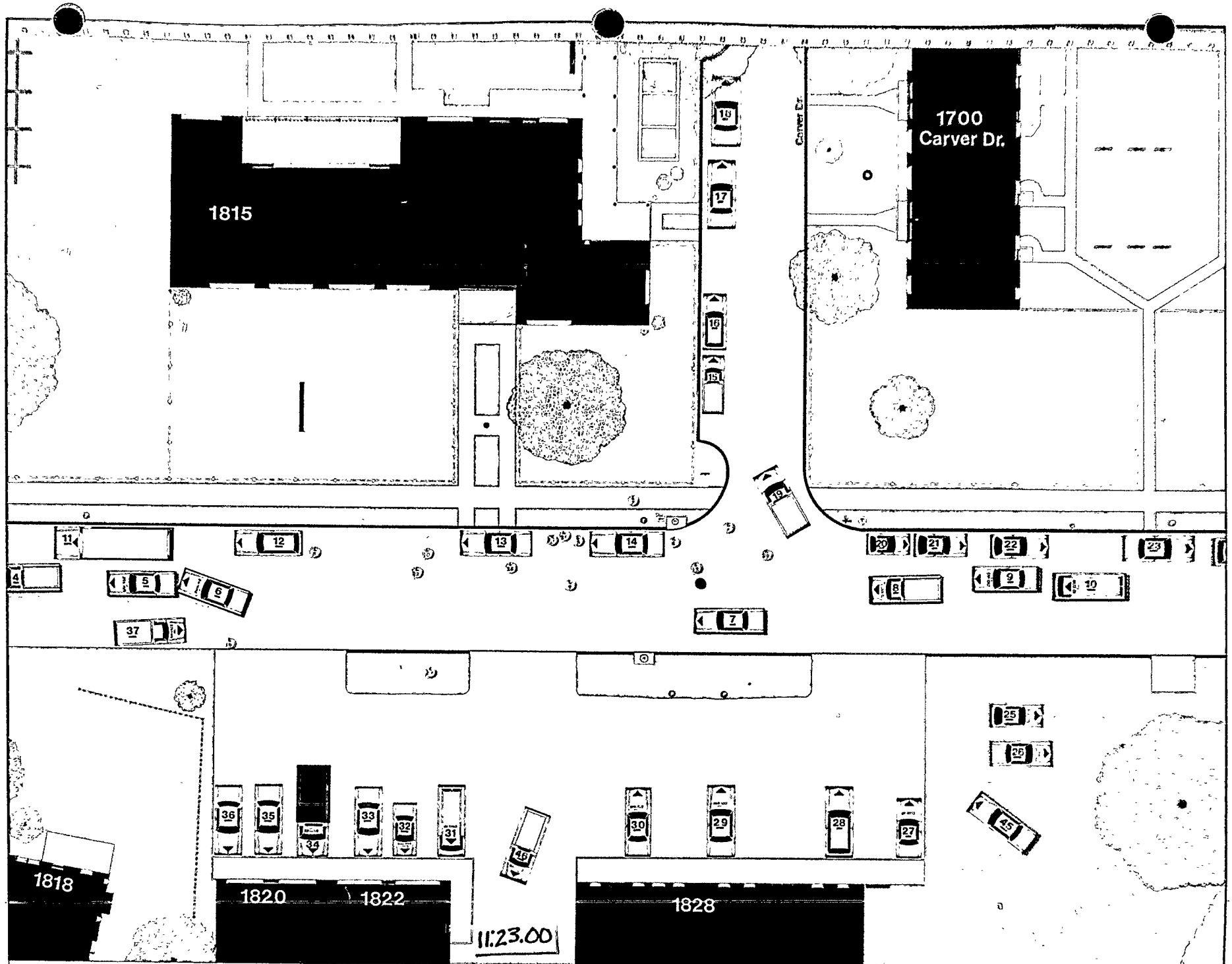
#56. 1971 FORD LTD SQUIRE, DARK COLOR

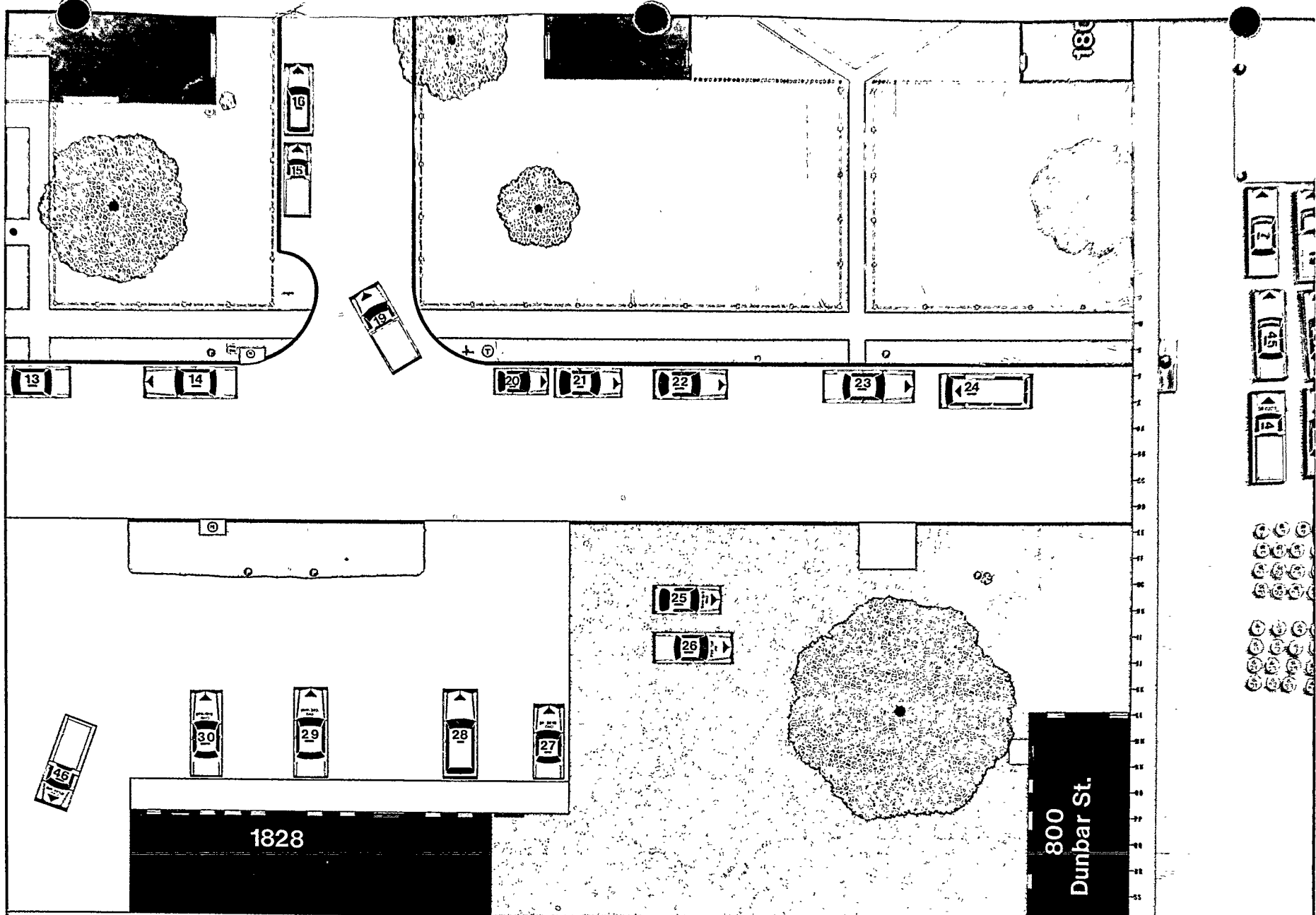
UNKNOWN LICENSE NUMBER

Does not enter diagram Area, not identified as yet.

END

[Signature]





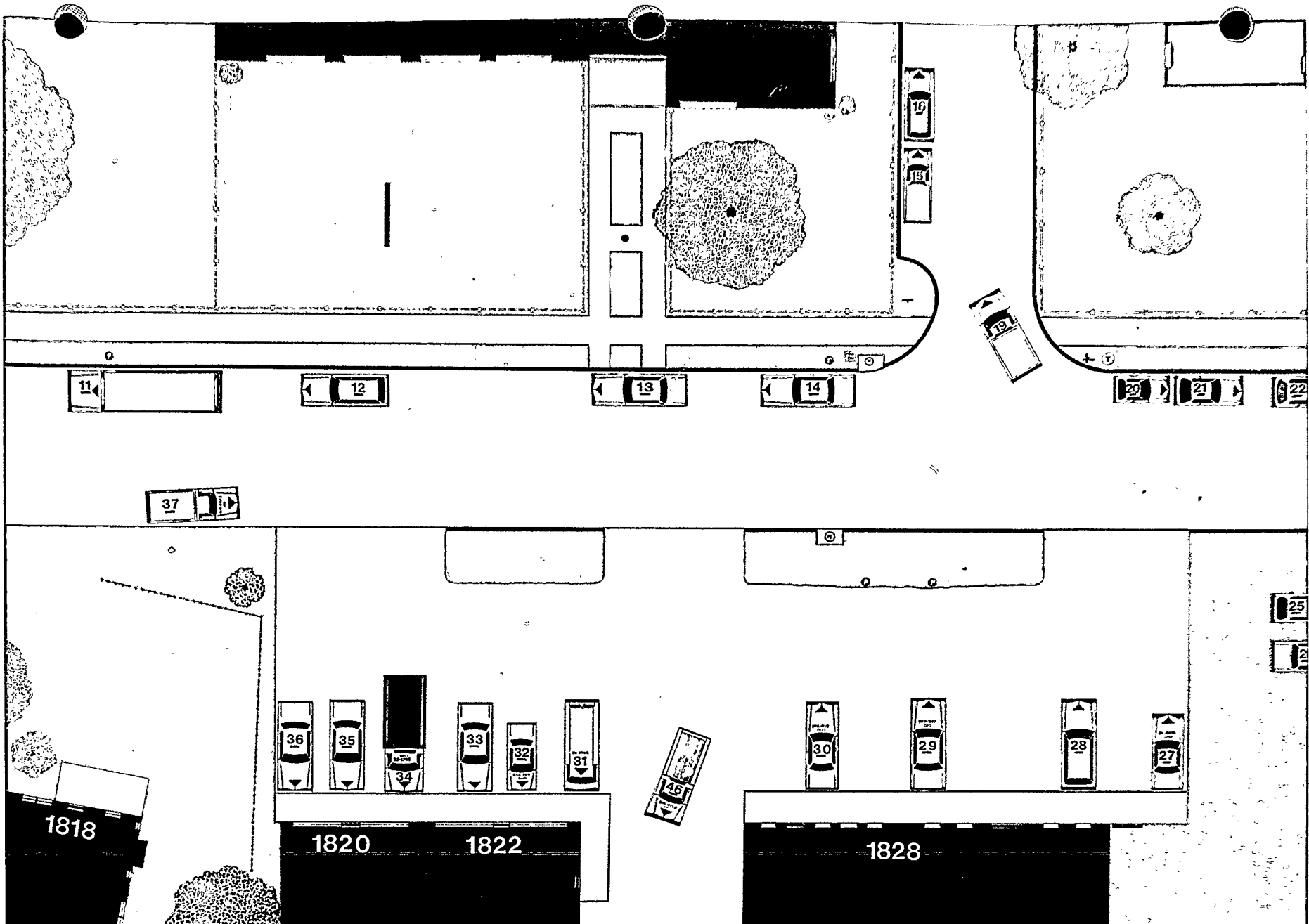
dated: **NOVEMBER 3, 1979**

Drawn By: **J.R. Ballance**

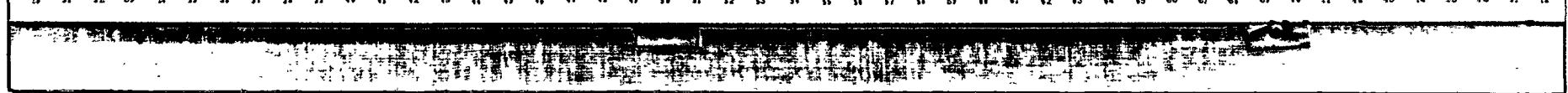
Badge Number: **379**

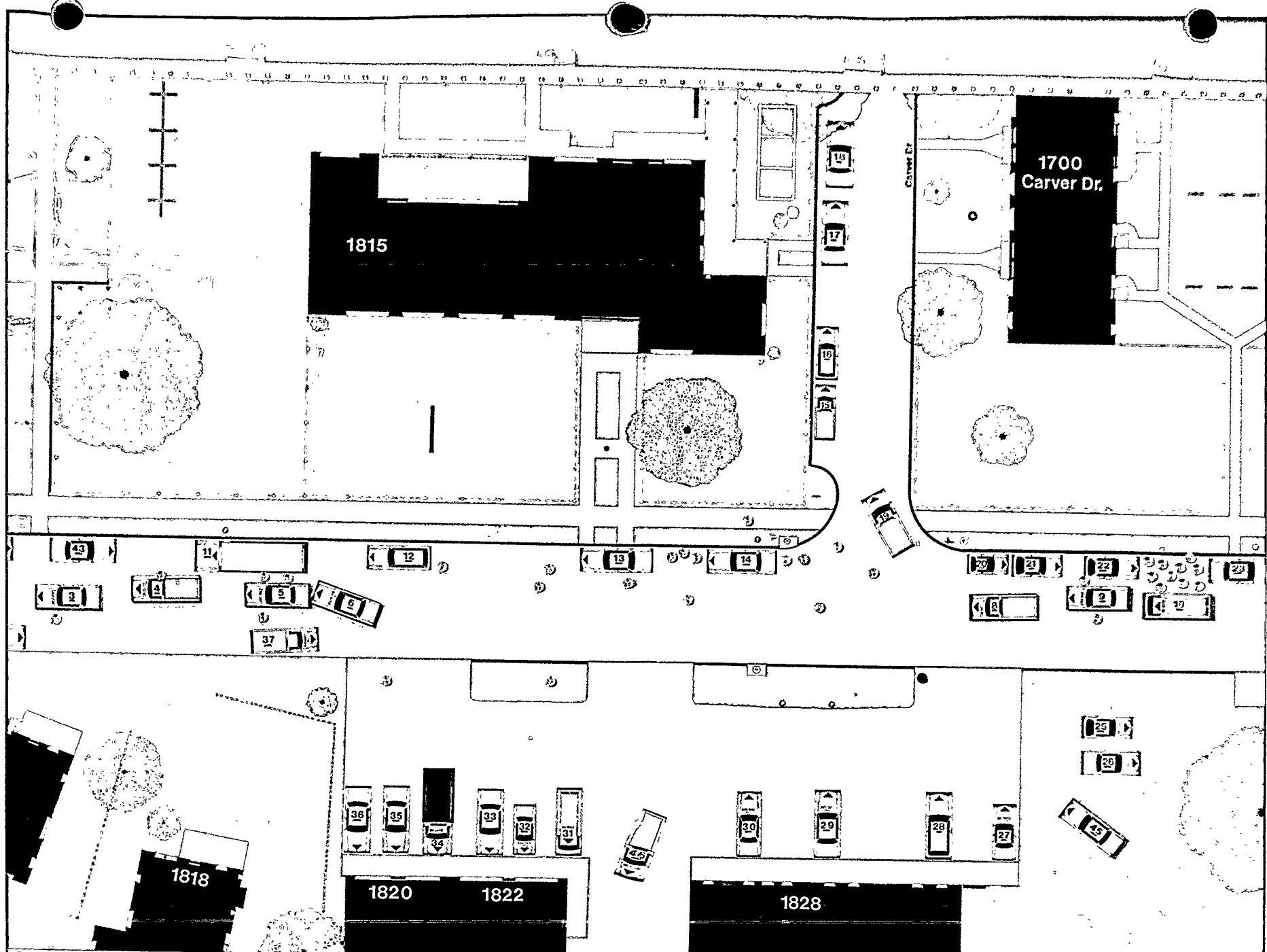
Date Finished: **DECEMBER 10, 1979**

33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85



AREA Scale: 1 inch=5 foot Crime: **HOMICIDE** Date Depicted: **NOVEMBER 3, 1979** Drawn By: **J.R. Ballance** Badge Number: **37**





CARVER DR. AREA Scale: 1 inch=5 foot Crime: **HOMICIDE** Date Depicted: **NOVEMBER 3, 1979** Drawn By: **J.R. Ballance** Badge Number: **379** Date Finished: **DECE**

Transient Analysis (measurement) of Q406 (Clam 2)
Woods Lab # 00107007 EQZ RD.

Decscope terminal model VT-52 connected to PDP 11/70 computer. Program on account I275, I7 (Program attached). Used an ALTEK Corp model AC-90C digitizer. Printout of analysis from HP 97 Programmable Calculator (Program attached). Also used a TI Programmable 59 Calculator (Program attached) and a ~~TI~~ TI PC-100A Hard Copy Printer.

LIST

SKILL 8-AUG-80 13:01:11

```
10 PRINT
15 N=1
20 PRINT "ENTER NEW BASE OR START POINT"
25 PRINT
30 INPUT A$
40 I$=SEG$(A$,1,1)
50 IF I$="F" THEN GO TO 250
55 IF I$="C" THEN GO TO 10
60 X$=SEG$(A$,3,4)+". "+SEG$(A$,5,7)
70 X1=VAL(X$)
75 IF X1>20 THEN X1=X1-100
80 PRINT "ENTER PEAK # " ; N
90 INPUT A$
100 I$=SEG$(A$,1,1)
110 IF I$="F" THEN GO TO 250
115 IF I$="C" THEN GO TO 10
120 X$=SEG$(A$,3,4)+". "+SEG$(A$,5,7)
130 X2=VAL(X$)
135 IF X2>20 THEN X2=X2-100
140 B1=X2-X1
150 S=B1*2.54
160 C1=S/500
170 C2=C1*339.243
180 C3=C1*1113
190 PRINT \ PRINT
200 PRINT "PEAK", "CENTIMETERS", "SECONDS", "METERS", "FEET"
210 PRINT N, S, C1, C2, C3
220 PRINT \ PRINT
230 N=N+1
240 GO TO 80
250 END
```

READY

HP-97
GKill Program

01	0	0
02	*LBLA	21 1
03	DSP3	-63 0
04	STOA	35 1
05	RCLA	36 1
06	5	0
07	0	0
08	0	0
09	=	-2
10	STOB	35 1
11	RCLB	36 1
12	3	0
13	3	0
14	9	0
15	.	-0
16	2	0
17	4	0
18	3	0
19	0	0
20	6	0
21	x	-0
22	STOC	35 1
23	RCLB	36 1
24	1	0
25	1	0
26	1	0
27	3	0
28	*	-0
29	STOD	35 1
30	RCLA	36 1
31	PRTX	-
32	RCLB	36 1
33	PRTX	-
34	RCLC	36 1
35	PRTX	-
36	RCLD	36 1
37	PRTX	-
38	R/S	-

cc *

Program TI-59
GKill

000	76	LBL
001	11	A
002	99	PRT
003	55	÷
004	05	5
005	00	0
006	00	0
007	95	=
008	42	STD
009	00	00
010	99	PRT
011	65	×
012	03	3
013	03	3
014	09	9
015	93	.
016	02	2
017	04	4
018	03	3
019	00	0
020	06	6
021	95	=
022	99	PRT
023	43	RCL
024	00	00
025	65	×
026	01	1
027	01	1
028	01	1
029	03	3
030	95	=
031	99	PRT
032	98	ADV
033	98	ADV
034	25	CLR
035	91	R/S
036	00	0
037	00	0
038	00	0
039	00	0
040	00	0

Absolute Time Calculation (at microphones)

Using the time code information recorded on the channel 2 and channel 11 soundtracks, the time of the first peak (max amplitude point) is used as the time of the gunshot. This is an accurate measurement at the microphones, but it does not take into effect the differences in microphone to muzzle blast distances which result in a maximum of 0.171 seconds, or typically 0.090 second. Since channel 2 did not record the first gunshot, its ~~second~~ first recorded gunshot is set equal to the value of the second recorded gunshot on channel 11.

<u>GUNSHOT</u>	<u>Channel 11 Transient</u>	<u>Channel 11 Absolute Time (seconds)</u>	<u>Channel 2 Transient</u>	<u>Channel 2 Absolute Time (seconds)</u>	
1	2	0.000	Not recorded	—	
2	13	22.311	5	22.311	
3	15	26.436	7	26.428	-8
4	17	27.168	8	27.162	-6
5	18	31.569	11	31.561	-8
6	19	42.944	15	42.947	+3
7	20	43.478	16	43.482	+4
8	21	44.097	17	44.098	+1
9	22	44.152	18	44.154	+2
10	23	45.240	19	45.243	+3
11	25	49.554	20	49.558	+4
12	26	51.409	21	51.411	+2
13	27	51.681	22	51.684	+3
14	29	51.912	24	51.914	+2
15	30	52.263	25	52.266	+3
16	31	53.129	26	53.132	+3
17	32	53.478	27	53.482	+4
18	33	53.914	28	53.915	+1
19	34	54.124	29	54.124	—
20	35	55.392	30	55.395	+3
21	36	56.309	31	56.311	+2
22	37	59.314	32	59.318	+4
23	38	60.178	33	60.182	+4
24	39	60.426	34	60.428	+2
25	40	61.702	35	61.705	+3
26	41	62.056	36	62.061	+5
27	42	62.751	37	62.755	+4

Absolute Time Calculation (at microphones)

<u>GUNSHOT</u>	<u>Channel 11 Transient</u>	<u>Channel 11 Absolute Time (sec)</u>	<u>Channel 2 Transient</u>	<u>Channel 2 Absolute Time (seconds)</u>	
28	43	63.071	38	63.074	+3
29	44	63.361	39	63.362	+1
30	45	64.899	40	64.898	-1
31	46	65.644	41	65.648	+4
32	47	66.724	42	66.726	+2
33	48	67.758	43	67.762	+4
34	49	68.010	44	68.010	-
35	50	76.703	46	76.712	+9
36	51	83.275	47	83.276	+1
37	52	86.652	49	86.652	-
38	53	87.268	50	87.265	-3
39	54	88.342	51	88.340	+4

Transient Analysis

1. Sound track on channel 8 not useful for analysis since every transient looked almost identical - an envelope of sounds with a large number of peaks within the envelope. This lack of identifying information was probably caused by the AGC system and possibly the microphone.
2. Very little ^{usable} visual information on channel 8 and it is not continuous throughout the incident.
3. No useful audio or visual information on channel 12.
4. Absolute time is set ^{forth in seconds} from the time of the first slot (Transient 2 on channel 11 video tape).
5. Echo times were computed both digitally and manually and a list was prepared of each gunshot transient waveform listing cm, msec, feet, meters.

①

Transient: 2 on channel 11 (transient not on channel 2)

Video Time: 11:28:12 on channel 11

Absolute Time: 0.00 second on channel 11

Visual Information: Blue smoke is seen moving rapidly at about a 45° vertical angle, south and west of the blue Dard hat of a white male wearing a black and white check coat in the center of the screen on the channel 11 video tape. Viewed both real time and slow motion copy ($1/30$ second takes one second). No useful information noted on channel 2 of what produced the transient. Channels 8 and 11 both reflect that soon after this transient a white male with a handgun is seen sticking out of the passenger side window of vehicle 4.

Aural Information: Using real time and $1/8$ th speed playback of high quality tape copy of the channel 11 video tape, a muffled gunshot-like sound is heard with a few sharp echoes following.

Visicorder Information: A transient waveform with the first peak, low in amplitude, but having a fast rise time and a few sharp echoes following. No N-wave present.

Analysis: The transient is a ~~subsonic~~ ^{probably subsonic} gunshot, due to the fast rise time of the first peak, the aural information, the visual information, and the lack of a precursory N-wave.

The channel 11 microphone location was approximately located by plotting different angles of view immediately before, during and after the impulse. The actual microphone location was then determined during the echo analysis. The microphone was found within ± 3 feet of 48.75 feet west and 64.69 feet south of the SW corner of 1-5-B APTS, near NE corner of Carver Court and Everett Street, or a distance of 81.00 feet directly from corner to microphone.

Transient: 2 on channel 11

Analysis (continued): The visivoder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agree with the echo times. Visual information was of limited help in locating the muzzle blast location. By plotting echos of the Moving Side Haves Recreation Buiding, vehicle 11, and other vehicles, it was determined that the gunshot occurred within ± 10 feet of 192.32 feet west sd within ± 3 feet of 67.42 feet south of the SW corner of 1-S-B APTS, or a distance of 203.84 feet directly from corner to muzzle blast (approximately 4 feet south of the middle of vehicle 11 - yellow bus ^{on} or very near vehicle 4).

Conclusion: This transient at 11:28:12 on the channel 11 video ^{tape} ^(possibly subsonic) (this is the first recorded gunshot) is a subsonic gunshot, and the muzzle blast occurs at a position 192.32 feet west (± 10 feet in the east-west direction) and 67.42 feet south (± 3 feet in the north-south direction) of the SW corner of 1-S-B APTS.

(2)

Transient: 13 on channel 11, 5 on channel 2

Video Time: 11:50:25 on channel 11, 21:57:17 on channel 2

Absolute Time: 22.311 seconds on channel 11

Visual Information: No useful information noted on channels 2 and 11. Channel 8 shows two white males in the general vicinity of vehicles 11 and 37 reacting to the impulsive sound by looking west and maybe slightly south on Everett Street.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes following.

Visicorder Information: A transient waveform with a ^{probable} precursory N-wave is noted with the first peak having a fast rise time and a number of sharp echoes (echoes mostly on channel 2 recording).

Analysis: The transient is a ^{probably supersonic} supersonic gunshot, due to the fast rise time of the first peak, the aural information, and the precursory N-wave.

Since the channel 11 recording had few echoes, the channel 2 microphone was used for all calculations. The channel 2 was approximately located by plotting different angles of view immediately before, during and after the impulse. The actual microphone location was then determined during the echo analysis. The channel 2 microphone was found within ± 5 feet of 33.56 feet west and 87.50 feet south of the SW corner of I-S-B APTS, near NE corner of Carver Court and Everett Street, or a distance of 93.89 feet directly from corner to microphone location.

Transient: 13 on channel 11, 5 on channel 2

Analysis: (continued) The microphone peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes off the Morning Side Homes Recreational Building, 1-S-B BLDG near vehicle 31, and various vehicles, it was determined that the gunshot occurred within ± 10 feet of ~~227.06~~^{227.06} feet west and within ± 5 feet ^{79.11 feet} south of the SW corner of 1-S-B APTS, or a distance of 240.2 feet directly from corner to muzzle blast. (about 23 feet west of the left rear of vehicle 37)

Conclusion: The transient at 11:50:25 on the channel 11 video ^{probably, supersonic} (22.311 seconds after first gunshot) is a supersonic gunshot and the muzzle blast occurs at a position 227.06 feet west (± 10 feet in the east-west direction) and 79.11 feet south (± 5 feet in the north-south direction) of the SW corner of 1-S-B APTS.

Transient: 15 on channel 11, 7 on channel 2

Video Time: 11:54:28 on channel 11, 22:01:21 on channel 2

Absolute Time: 26.436 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot like sound is heard with a very sharp muzzle blast and a series of echoes following.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. ^{Underground} ~~No~~ N-wave present.

Analysis: The transient is a ~~subsonic~~ ^{underground} gunshot, due to the fast rise time of the first peak, the aural information, and the lack of a precursory N-wave.

The channel 11 microphone location was located by using visual information and the echo off 1-S-B BLOG to be within ± 5 feet of 41.34 feet west and 113.58 feet south of the SW corner of 1-S-B APTS, near NE corner of Carter Court and Everett Street at a distance of 120.96 feet directly from corner to microphone location. Channel 2 microphone location not determined as there was no additional, useable info on channel 2.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations were calculated but no definite position could be found due to movement of the video equipment, lack of visual information, and the limited number of echoes. The gunshot probably occurred in the rectangle with the south border the middle of Everett Street, the east border is a line extended along the west edge of 1-S-B APTS, the north border along a line extended down the middle of the first sidewalk, north of the SW corner of 1-S-B APTS (leading into 1st APTS), and the west border is a line extended along the east edge of the Morning Side Home Recreational Building. Very slight chance in vicinity of gunshots 1 and 2. Definitely not in vicinity of videos 20, 21, 22, 23, 9 and 10.

Transient: 15 on channel 11, 7 on channel 2

Conclusion: This transient at 11:54:28 on the channel 11 video tape (26.436 seconds after first recorded gunshot) is a gunshot, unknown if supersonic, and the missile blast probably occurs in the vicinity of north of the intersection of Everett Street and Carter Court. No exact location could be determined.

(4)

Transient: 17 on channel 11, 8 on channel 2

Video Time: 11:55:20 on channel 11, 22:02:12

Absolute Time: 27.168 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visiowave Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. ~~the~~ ^{possibly} W-wave present.

Analysis: The transient is a ~~subsonic~~ ^{possibly supersonic} gunshot, due to the fast rise time of the first peak, the aural information, and the lack of a precursory N-wave.

Rest same as gunshot (3) except ^{channel 11} microphone position changed to within ± 5 of 41.44 feet west and 120.28 feet south of the SW corner of 1-5-B APTS, near NE corner of Carver Court and Everett Street, at a distance of ~~127.26~~ ^{127.26} feet directly from corner to microphone location.

~~Conclusion~~
Conclusion: This transient at 11:55:20 on ^{the} channel 11 video tape (27.168 seconds after first recorded gunshot) is a gunshot, possibly supersonic, and the muzzle blast probably occurs in the vicinity of north of the intersection of Everett Street and Carver Court. No exact location could be determined.

⑤

Transient: 18 on channel 11, 11 on channel 2

Video Time: 12:00:03 on channel 11, 22:06:25 on channel 2

Absolute Time: 31.569 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos. ^{unknown if} N-wave present.

Analysis: The transient is a ~~subsonic~~ ^{unknown if supersonic} gunshot, due to the fast rise time of the first peak, the aural information, and the lack of a precursory N-wave.

Same as gunshot ③ except ^{channel 11} microphone position same as gunshot ⑥.

Conclusion: This transient at 12:00:03 on the channel 11 video tape (31.569 seconds after the first recorded gunshot) is a gunshot, ^{unknown if supersonic}, and the muzzle blast probably occurs in the vicinity of north of the intersection of Everett Street and Carver Court. No exact location could be determined.

⑥

Transient: 19 on channel 11, 15 on channel 2

Video Time: 12:11:14 on channel 11, 22:18:06 on channel 2

Absolute Time: 42.944 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visual Information: A transient waveform with the first peak being a fast rise time and a number of sharp echoes following. Probable N-wave present.

Analysis: The transient is a gunshot, probably supersonic, due to the fast rise time of the first peak, the aural information, and the probable precursory N-wave.

The channel 11 and channel 2 microphone locations were approximately located by plotting different angles of views immediately before, during and after the gunshot. The actual microphone locations were then determined during the echo analysis, especially using the echo off the building behind the camera locations. The channel 11 microphone was found within ± 3 feet of 40.35 feet west and 137.21 feet south of the SW corner of 1-5-B APTS, near NE corner of Carver Court and Everett Street, or a distance of 142.81 feet directly from corner to microphone location (approximately $2\frac{1}{2}$ feet east and 1 foot north of the right rear of vehicle 29). The channel 2 microphone was found within ± 3 feet of 43.36 feet west and 138.34 feet south of the SW corner of 1-5-B APTS, or a distance of 144.98 feet directly from corner to microphone position (approximately at right rear corner of vehicle 29).

Transient: 19 on channel 11, 15 on channel 2

Analysis (continued): The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calibrated before a position was found that agreed with the echo times. By plotting echoes off 1-S-B APTS, 1-S-B BLOG behind the cameras, and various vehicles, it was determined that the gunshot occurred within ± 5 feet of 32.78 feet east and within ± 3 feet ^{of 62.25 feet} south of the SW corner of 1-S-B APTS, on a distance of 70.47 feet directly from corner to muzzle blast (about 1 foot SW of the ~~SW~~ front corner of vehicle 22).

Probably fired by the ~~same~~ individual firing transit 23 on channel 11.

Conclusion: This transient at 12:11:14 on the channel 11 video tape (42.9⁴⁴ seconds after first recorded gunshot) is a gunshot, probably supersonic, and the muzzle blast occurs at a position ~~32.78~~ 32.78 feet east (± 5 feet in the east-west direction) and 62.25 feet south (± 3 feet in the north-south direction) of the SW corner of 1-S-B APTS. Probably fired by the individual that fired the gunshot in transient 23 on channel 11.

①

Transient: 20 on channel 11, 16 on channel 2

Video Time: 12:12:02 on channel 11, 22:18:21 on channel 2

Absolute Time: 43.478 on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{2}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos following. ~~Underneath~~ ^{possibly} Possible N-wave present.

Analysis: The transient is a gunshot ~~underneath~~ ^{possibly} of supersonic, due to the fast rise time of the first peak and the aural information.

Microphone locations same as in transient 19 on channel 11.

Position of muzzle blast located as in transient 19 on channel 11, but the position has changed slightly. It was determined that the gunshot occurred within ± 5 feet of 32.19 feet east and within ± 3 feet of 61.47 feet south of the SW corner of 1-S-B APTS, or a distance of 69.39 feet directly from corner to muzzle blast (about 1 foot west from front right corner of vehicle 22).

Conclusion: This transient at 12:12:02 on channel 11 video tape (43.478 seconds after first recorded gunshot) is a gunshot, ~~underneath~~ ^{possibly} of supersonic, and the muzzle blast occurs at a position 32.19 feet east (within ± 5 feet in the east-west direction) and 61.47 feet south (within ± 3 feet in the north-south direction) of the SW corner of the ~~SW corner~~ 1-S-B APTS.

⑧

Transient: 21 on channel 11, 17 on channel 2

Video Time: 12:12:14 on channel 11, 22:19:09 on channel 2

Absolute Time: 44.097 seconds on channel 11

Visual Information: No information noted re what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channel 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos following. ~~transient~~ if Probable N-wave present.

Analysis: Same as transient 20 on channel 11. except probably supersonic.

Conclusion: This transient at 12:12:14 on the channel 11 video tape (44.097 seconds after first recorded gunshot) is a gunshot, ~~and probably~~ ^{probably} supersonic, and the muzzle blast occurs at a position 32.19 feet east (within ± 5 feet in the east-west direction) and 61.47 feet south (within ± 3 feet in the north-south direction) of the SW corner of ~~the~~ of 1-S-B APTS.

⑨

Transient 22 on channel 11, 18 on channel 2

Video Time: 12:12:16 on channel 11, 22:19:10 on channel 2

Absolute Time: 44.152 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Vesicular Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos following. Probable N-wave present.

Analysis: Same as transient 19 on channel 11.

Conclusion: This transient at 12:12:16 on the channel 11 video tape (44.152 seconds after first recorded gunshot) is a gunshot, probably supersonic, and the muzzle blast occurs at a position 32.78 feet east (± 5 feet in the east-west direction) and 62.25 feet south (± 3 feet in the north-south direction) of the SW corner of I-S-B APTS. Probably fired by the individual that fired the gunshot in transient 23 on channel 11.

(10)

Transient: 23 on channel 11, 19 on channel 2

Video Time: 12:13:15 on channel 11, 22:20:14 on channel 2

Absolute Time: 45.240 seconds on channel 11

Visual Information: Channel 11 shows a white male in a white sweater or shirt, dark trousers and bearded firing a shoulder weapon from his right shoulder from NE of the right rear corner of vehicle 9. Channels 2 and 8 had no useful information on what produced the transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos. Some movement of video equipment heard on channel 11.

Videographic Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos following. Probable N-wave present.

Analysis Same as transient 19 on channel 11 except the gunshot is fired by a white male in a white sweater or shirt, dark trousers, and beard firing a shoulder weapon from his right shoulder from NE of the right rear corner of vehicle 9.; and the position is changed slightly to within ± 5 feet of 30.25 feet east and within ± 3 feet of 62.11 feet south of the SW corner of 1-5-B APTS, or a distance of 69.10 feet directly from corner to muzzle blast.

Conclusion: This transient at 12:13:15 on channel 11 video tape (45.240 seconds after first recorded gunshot) is a gunshot, probably supersonic, and the muzzle blast occurs at a position 30.25 feet east (± 5 feet in the east-west direction) and 62.11 feet south (± 3 feet in the north-south direction) of the SW corner of 1-5-B APTS. This gunshot is fired by the bearded white male in a white sweater or shirt and dark trousers, ~~also~~ with a shoulder weapon on his right shoulder, near the right rear corner of vehicle 9.

(11)

Transient: 25 on channel 11, 20 on channel 2

Video Time: 12:18:00 on channel 11, 22:24:26 on channel 2

Absolute Time: 49.554 seconds on channel 11

Visual Information: Channel 11 shows a white male in a red & white baseball cap ^{and a light colored top} firing a shoulder weapon from his left shoulder between vehicles 10, 22 and 23. Channels 2 and 8 had no useful information on what produced the transient.

Aural Information: Using real time and 1/4th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes following. N-wave present.

Analysis: The transient is a supersonic gunshot due to the fast rise time ^{of the first peak}, the aural information, the visual information, and the precursory N-wave.

The microphone very close to the position found on transient 19 on channel 11.

Position located as on transient 19 on channel 11 except the actual position found to be within ± 5 feet of 38.68 feet east and 59.55 feet south of the SW corner of 1-S-B APTS, or a direct distance from corner to muzzle blast of 70.96 feet.

The shot was fired by the white male in a red & white baseball cap ^{and a light colored top} firing a shoulder weapon from his left shoulder between vehicles 10, 22 and 23.

Transient: 25 on channel 11, 20 on channel 2

Conclusion: This transient at 12:18:00 on channel 11 video tape
(^{49.554} seconds after first recorded gunshot) is a supersonic
gunshot and the muzzle blast occurs at a position 38.68
feet east (± 5 feet in the east-west direction) and 59.55 feet
south (± 5 feet in the north-south direction) of the SW
corner of 1-5-B APTS. This gunshot was fired by the
white male in a red and white baseball cap, with a shoulder
weapon on his left shoulder, near vehicles 10, 22 and 23.

(12)

Transient: 26 on channel 11, 21 on channel 2

Video Time: 12:19:26 on channel 11 video tape, 22:26:19 on channel 2

Absolute Time: 51.409 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time at $\frac{1}{2}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. Undersown if supersonic ~~was~~ N-wave is present.

Analysis: The transient is a gunshot, undersown if supersonic, due to the fast rise time of the first peak and aural information.

The microphones are very close to the positions found on transient 19 on channel 11.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calibrated before a position was found that agreed with the echo times. By plotting echoes off the 1-S-B APTS, 1-S-B BLDG behind the camera positions, the corner of the Morning Side Homes Recreational Building and a number of vehicles, it was determined that the gunshot occurred within ± 5 feet of ~~215.00~~^{13.00} feet west and ~~48.82~~^{48.82} feet north of the SW corner of 1-S-B APTS, or a distance of ~~46.00~~^{50.44} feet directly from corner to muzzle blast (about 8 feet west from second porch of 1-S-B APTS from SW corner).

This gunshot was probably fired by the white female described in that fires the pistol in transient 31 of channel 11.

Transient: 26 on channel 11, 21 on channel 2

Conclusion: This transient at 12:19:26 on the channel 11 video tape (51.409 seconds after first recorded gunshot) is a gunshot, undrown if supersonic, and the muzzle blast occurs within ~~±~~ \pm 5 feet of ~~8m~~^{13.00} feet west and ~~40m~~^{46.62} feet north of the SW corner of 1-5-B APTS. This gunshot was probably fired by the white female seen shooting in transient 31 of channel 11.

(13)

Transient: 27 on channel 11, 22 on channel 2

Video Time: 12:20:04 on channel 11, 22:26:25 on channel 2

Absolute Time: 51.681 seconds on channel 11

Visual Information: Channel 2 shows a ^{bearded} white male in a white sweater or shirt between vehicles 21 and 22 probably sloting a shoulder weapon on his right shoulder. No information noted on channels 8 and 11 on what produced this transient.

Aural Information: Using real time and $\frac{1}{2}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos. N-wave probably present.

Analysis: The transient is a gunshot, probably supersonic, due to the fast rise time of the first peak, the aural information, the visual information, and the probable N-wave.

The microphones positions are very close to those set forth on transient 19 on channel 11.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were ~~calculated~~ ^{calculated} before a position was found that agreed with the echo times. By plotting echos off 1-S-B APTS, 1-S-B BLDG behind the camera, and various vehicles, it was determined that the gunshot occurred within ± 3 feet of 17.08 feet east and 56.20 feet south of the SW corner of 1-S-B APTS, or a distance of 58.66 feet directly from corner to muzzle blast (about 2 feet east of the left front corner of vehicle 21).

This gunshot was fired by the white male described in the visual information.

Transient: 27 on channel 11, 22 on channel 2

Conclusion: This transient at 12:20:04 on the channel 11 video tape (51.681 seconds after the first recorded gunshot) is a gunshot, probably supersonic, and the muzzle blast occurs within ± 3 feet of 17.08 feet east and 56.20 feet south of the SW corner of 1-S-B APTS. This gunshot was fired by the ^{bearded} white male in the white sweater or shirt with the shoulder weapon between vehicles 21 and 22.

Transient: 29 on channel 11, ~~29~~²⁴ on channel 2

Video Time: 12:20:09 on channel 11, 22:27:03 on channel 2

Absolute Time: 51.912 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos. Unknown if supersonic N-wave is present.

~~Analysis: Same as transient 26 on channel 11 except the position of the muzzle blast has changed slightly to within 5 feet of.~~

Analysis: Same as transient 26 on channel 11.

Conclusion: This transient at 12:20:09 on the channel 11 video tape (51.912 seconds after first recorded gunshot) is a gunshot, unknown if supersonic, and the muzzle blast occurs within ± 5 feet of 13.00 feet west and 48.82 feet north of the SW corner of 1-5-B APTS. This gunshot was probably fired by the white female seen shooting in transient 31 on channel 11.

Transient: 30 on channel 11, 25 on channel 2

Video Time: 12:20:16 on channel 11, 22:27:15 on channel 2

Absolute Time: 52.263 seconds on channel 11

Visual Information: Channels 8 and 11 show a white male in a blue jacket and trousers firing a handgun in his right hand on the sidewalk near vehicle 19 at the NE corner of Carver Court and Everett Street. Channel 2 contains no information on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a limited number of echoes.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a limited number of sharp echoes. N-wave present.

Analysis: The transient is a ^{probably supersonic} gunshot, ^{probably supersonic} due to the fast rise time of the first peak, the aural information, the visual information, and the precursory N-wave.

The microphone positions are very close to those set forth on transient 19 on channel 11.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes off 1-S-B BLDG behind cameras, the trash can, street signs, posts, and a number of vehicles, it was determined that the gunshot occurred within ± 3 feet of ~~15.16~~ ^{15.16} feet west and ~~46.85~~ ^{46.85} feet south of the SW corner of 1-S-B APTS, or a distance of 49.11 feet directly from corner to muzzle blast (on sidewalk near NE corner of Carver Court and Everett Street).

This gunshot was fired by the white male described in the visual information.

Transient: 30 on channel 11, 25 on channel 2

Conclusion: This transient at 12:20:16 on the channel 11 video tape (52.263 seconds after the first recorded gunshot) is a ~~supersonic~~ ^{probably supersonic} gunshot and the muzzle blast occurs within ± 3 feet of 15.16 feet west and 46.85 feet south of the SW corner of 1-S-B APTS. This gunshot was fired by the white male in a blue jacket and trousers with the handgun in his right hand near the ^{NE} corner of Carver Court and Everett Street.

Transient: 31 on channel 11, 26 on channel 2

Video Time: 12:21:16 on channel 11, 22:28:10 on channel 2

Absolute Time: 53.129 seconds on channel 11

Visual Information: Channel 11 shows a white female in a yellow raincoat firing a handgun in her right hand from the west side of 1-S-B APTS, in the shadow of the building. No information on what produced this transient on channels 2 and 8.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visiocoder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. Unknown if supersonic N-wave is present.

Analysis: Same as transient 26 on channel 11 except gunshot is fired by the white female described in the visual information and the position of the muzzle blast is changed slightly to within ± 5 feet of 8.56 feet west and 46.06 feet north of the SW corner of 1-S-B APTS, or a distance of 46.85 feet directly from corner to muzzle blast (about 4 feet SW from second porch of 1-S-B APTS from SW corner).

Conclusion: This transient at 12:21:16 on the channel 11 video tape (53.129 seconds after first recorded gunshot) is a gunshot, unknown if supersonic, and the muzzle blast occurs within ± 5 feet of 8.56 feet west and 46.06 feet north of the SW corner of 1-S-B APTS. This gunshot was fired by the white female in a yellow raincoat seen firing a handgun in her right hand from the west side of 1-S-B APTS.

(7)

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Transient: 32 on channel 11, 27 on channel 2

Video Time: 12:21:21 on channel 11, 22:28:18 on channel 2

Absolute Time: 53.478 seconds on channel 11

Visual Information: Same as transient 31 on channel 11.

Aural Information: Same as transient 31 on channel 11.

Visicorder Information: Same as transient 31 on channel 11.

Analysis: Same as transient 31 on channel 11.

Conclusion: This transient at 12:21:21 on the channel 11 video tape (53.478 seconds after first recorded gunshot) is a gunshot, undetermined if supersonic, and the muzzle blast occurs within ± 5 feet of 8.56 feet west and 46.06 feet north of the SW corner of 1-S-B APTS. This gunshot was fired by the white female in a yellow raincoat seen firing firing a handgun in her right hand from the west side of 1-S-B APTS.

18

Transient: 33 on channel 11, 28 on channel 2

Video Time: 12:22:10 on channel 11, 22:29:04 on channel 2

Absolute Time: 53.914 seconds on channel 11

Visual Information: Same as transient 31 on channel 11.

Aural Information: Same as transient 31 on channel 11.

Visicorder Information: Same as transient 31 on channel 11.

Analysis: Same as transient 31 on channel 11.

Conclusion: This transient at 12:22:10 on the channel 11 video tape (53.914 seconds after first recorded gunshot) is a gunshot, unknown if supersonic, and the muzzle blast occurs within ± 5 feet of 8.56 feet west and 46.06 feet north of the SW corner of 1-S-B APTS. This gunshot was fired by the white female in a yellow raincoat seen firing a handgun in her right hand from the west side of 1-S-B APTS.

(19)

Transient: 34 on channel 11, 29 on channel 2

Video Time: 12:22:14 on channel 11, 22:29:10 on channel 2

Absolute Time: 54.124 seconds on channel 11

Visual Information: Channel 11 shows a white male in a blue jacket and trousers firing a handgun in his left hand on the sidewalk near vehicle 19 at the NE corner of Carver Court and Everett Street. Channels 2 and 8 contain no information on what produced this transient.

Aural Information: Using real time and $\frac{1}{2}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a number of echoes.

Videographic Information: A transient waveform with the first peak having a fast rise time and a series of sharp echoes. ^{probably} N-wave present.

Analysis: The transient is a ^{probably} supersonic gunshot, due to the fast rise time of the first peak, the aural information, the visual information, and the ^{precursory} N-wave.

The microphone positions are very close to those set forth on transient 19 on channel 11.

The rest same as analysis on transient 30 on channel 11 except position of muzzle blast changed slightly to ~~to~~ within ± 3 feet of 19.39 feet west and 48.13 feet south of the SW corner of 1-S-B APTS, or a distance of 51.97 feet directly from corner to muzzle blast (on sidewalk near ^{NE} corner of Carver Court and Everett Street).

Conclusion: This transient at 12:22:14 on channel 11 video tape (54.124 seconds after the first recorded gunshot) is a ^{probably} supersonic gunshot and the muzzle blast occurs within ± 3 feet of 19.39 feet west and 48.13 feet south of the SW corner of 1-S-B APTS. This gunshot was fired by the white male in a blue jacket and trousers ~~fire~~ with the handgun in his left hand near the NE corner of Carver Court and Everett Street.

Transient: 35 on channel 11, 30 on channel 2

Video Time: 12:23:26 on channel 11, 22:30:19 on channel 2

Absolute Time: 55.392 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a muffled muzzle blast and a number of sharp echoes.

Visicorder Information: A transient waveform with the first peak attenuated, but with a fast rise time, and series of sharp echoes. ~~Unknown~~ ^{possibly} supersonic.

Analysis: The transient is a gunshot, ~~unknown~~ ^{possibly} supersonic, due to the fast rise time of the first peak and the aural information.

The microphone locations are very close to those set forth on transient 19 on channel 11.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes of 1-S-B APTS, 1-S-B BLDG behind cameras, sign posts, and various vehicles it was determined that the gunshot occurred within ± 3 feet of 31.00 feet east and 66.49 feet south of the SW corner of the 1-S-B APTS, or a distance of 73.33 feet directly from corner to muzzle blast (very near right rear corner of vehicle 9).

Conclusion: This transient at 12:23:26 on the channel 11 video tape (55.392 seconds after first gunshot) is a gunshot, ~~unknown~~ ^{possibly} supersonic, and the muzzle blast occurs at a position within ± 3 feet of 31.00 feet east and 66.49 feet south of the SW corner of the 1-S-B APTS.

(21)

Transient: 36 on channel 11, 31 on channel 2

Video Time: 12:24:23 on channel 11, 22:31:16 on channel 2

Absolute Time: 56.309 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a relatively low amplitude gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A relatively low amplitude transient waveform with the first peak having a fast rise time and a number of sharp echos. ~~No~~ ^{unknown} N-wave present.

Analysis: The transient is a ~~subsonic~~ ^{unknown if supersonic} gunshot due to the fast rise time of the first peak of the aural information, and ~~the~~ lack of a pre-cursor N-wave. Possibly a pistol shot due to the low amplitude.

The channel 11 and channel 2 microphone locations were approximately located by plotting different angles of view immediately before, during and after the impulse. The actual microphone locations were then determined during the echo analysis, especially using the echo off the building behind the camera locations. The channel 11 ^{microphone} was found within ± 3 feet of 40.35 feet west and 137.21 feet south of the SW corner of 1-S-B APTS, near NE corner of Carver Court and Everett Street, at a distance of 142.81 feet directly from corner to microphone location (approximately $2\frac{1}{2}$ feet east and 1 foot north of the right rear of vehicle #29). The channel 2 microphone was found within ± 3 feet of 43.36 feet west and ~~#~~ 138.34 feet south of the SW corner of 1-S-B APTS, at a distance of 144.98 feet directly from corner to microphone position (approximately at right rear corner of vehicle #29).

Transient: 36 on channel 11, 31 on channel 2

Analysis (continued) The visicoder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes off the Morning Side Homes Recreational Building, 1-S-B BLDG behind the cameras, trees, and various vehicles, it was determined that the gunshot occurred within ± 3 feet of 58.07 feet west and within ± 7 feet of 13.98 feet north of the SW corner of 1-S-B APTS, or a distance of 59.74 feet directly from corner to muzzle blast (approximately 8 feet from Morning Side Homes Recreational Building).

Conclusion: This transient at 12:24:23 on the channel 11 video tape (56.309 seconds after first gunshot) is a ~~subsonic~~ ^{unknown if supersonic} gunshot, possibly from a pistol, and the muzzle blast occurs at a position 58.07 feet west (± 3 feet in the east-west direction) and 13.98 feet north (± 7 feet in the north-south direction) of the SW corner of 1-S-B APTS.

(22)

Transient: 37 on channel 11, 32 on channel 2

Video Time: 12:27:24 on channel 11, 22:34:18 on channel 2

Absolute Time: 59.314 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{2}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a series of sharp echoes.

Videographic Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. N-wave present.

Analysis: The transient is a supersonic gunshot due to the fast rise time of the first peak, the aural information, and the precursory N-wave.

Location of camera positions approximately the same as transient 36 on channel 11.

The videographic peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes off the I-S-B APTS, the I-S-B BLDG. behind the cameras, and various vehicle, it was determined that the gunshot occurred within ± 3 feet of 11.42 feet east and 76.97 feet south of the SW corner of I-S-B APTS, or a distance of ~~77.76~~ 77.76 feet directly from corner to muzzle blast (slightly SW of front left corner of vehicle 9).

The same white male that fired gunshot transient 42 on channel 11 probably fired this shot due to the short time difference, the close proximity of the gunshots, the visual information at transient 42 on channel 11 showing no one else close, and the characteristic N-wave of the weapon.

Transient: 37 on channel 11, 32 on channel 2

Conclusion: This transient at 12:27:24 on the channel 11 video tape (59.314 seconds after first recorded gunshot) is a supersonic gunshot and the muzzle blast occurs at a position within ± 3 feet of 11.42 feet east and 76.97 feet south of the SW corner of 1-S-B APTS. This gunshot is probably fired by the white male described in transient 42 on channel 11.

(23)

Transient: 38 on channel 11, 33 on channel 2

Video Time: 12:28:20 on channel 11, 22:35:12 on channel 2

Absolute Time: 60.178 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Same ^{as} transient 37 on channel 11.

Visiconder Information: Same ^{as} transient 37 on channel 11.

Analysis: Same as transient 37 on channel 11

Conclusion: This transient at 12:28:20 on the channel 11 video tape (60.178 seconds after first recorded gunshot) is a supersonic gunshot and the muzzle blast occurs at a position within ± 3 feet of 11.42 feet east and 76.97 feet south of the SW corner of 1-S-B APTS. This gunshot is probably fired by the white male described in transient 42 on channel 11.

(24)

Transient: 39 on channel 11, 34 on channel 2

Video Time: 12:28:25 on channel 11, 22:35:18 on channel 2

Absolute Time: 60.426 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channel 11 and channel 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes.
Unknown ~~if~~ N-wave present.

Analysis: The transient is a ~~subsonic~~ ^{unknown if supersonic} gunshot, due to the fast rise time of the first peak, the aural information, and the lack of a precursory N-wave.

See transient 36 on channel 11 for location of microphones.

Location of muzzle blast located the same as in transient 36 on channel 11, except position changed somewhat to ^{within} ± 3 feet of 58.61 feet west and within ± 5 feet of 7.68 feet north of the SW corner of 1-S-B APTS, on a distance of 59.10 feet directly from corner to muzzle blast (approximately 7 feet from Morning Side Homes Recreational Building).

Conclusion: This transient at 12:28:25 on ^{the} channel 11 video tape ^{unknown if supersonic} (60.426 seconds after first gunshot) is a ~~subsonic~~ ^{unknown if supersonic} gunshot, and the muzzle blast occurs at a position 58.61 feet west (± 3 feet in the east-west direction) and 7.68 feet north (± 5 feet in the north-south direction) of the SW corner of 1-S-B APTS.

(25)

Transient: 40 on channel 11 (Transient 35 on channel 2)

Video Time: 12:30:05 on channel 11, 22:36:28 on channel 2

Absolute Time: 61.702 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a ^{large} number of sharp echoes. Probable N-wave present.

Analysis: This transient is a gunshot, probably supersonic, due to the fast rise time of the first peak, the aural information, and the probable precursory N-wave.

See transient 36 on channel 11 for locations of microphones.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes of 1-S-B APTS, 1-S-B BLDG behind camera, a tree, and various vehicles, it was determined that the shot occurred within ± 3 feet of 1.18 feet west and 62.40 feet south of the SW corner of 1-S-B APTS, or a distance of 62.40 feet directly from corner to muzzle blast (about 2 feet west of the right front corner of vehicle 20).

This gunshot was fired by a white male in a red flannel-like shirt and blue jeans who is poorly seen in that location at 12:30:08 on channel 11. A better view of him is seen a few seconds earlier on channel 11.

Transient: 40 on channel 11, 35 on channel 2

Conclusion: This transient at 12:30:05 on the channel 11 video tape (61.702 seconds after first recorded gunshot) is a gunshot, probably supersonic, and the muzzle blast occurs at a position within ± 3 feet of 1.18 feet west and 62.40 feet south of the SW corner of 1-S-B APTS. This gunshot was fired by a white male in a red flannel-like shirt and blue jeans who is poorly seen at 12:30:06 on channel 11. A better view of him is seen a few seconds earlier on channel 11.

Transient: 41 on channel 11, 36 on channel 2

Video Time: 12:30:17 on channel 11, 22:37:05 on channel 2

Absolute Time: 62.056 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and both speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echos. N-wave present

Analysis: Same as transient 37 on channel 11 except the white male described in Transient 42 on channel 11 fired this gunshot due to the very short time difference, the same portion of the muzzle blast, the visual information on transient 42 on channel showing no one else close to the slotted, and the characteristic N-wave; also the position is changed slightly to within ± 3 feet of 13.09 feet east and 75.20 feet south of the SW corner of 1-S-B APTS, or a distance of 76.57 feet directly from corner to muzzle blast (near left front corner of vehicle 9).

Conclusion: This transient at 12:30:17 on the channel 11 video tape (62.056 seconds after first recorded gunshot) is a supersonic gunshot and the muzzle blast occurs at a position within ± 3 feet of 13.09 feet east and 75.20 feet south of the SW corner of 1-S-B APTS. This gunshot is fired by the white male described in transient 42 on channel 11.

(27)

Transient: 42 on channel 11, Transient 37 on channel 2

Video Time: 12:31:00 on channel 11, 22:37:29 on channel 2

Absolute Time: 62.751 seconds on channel 11

Visual Information: Channels 2 and 11 show a white male with shoulder length hair, tall, large frame in a blue-jean outfit firing a shoulder weapon with a banana clip on his right shoulder next to left front corner of vehicle 9.

Aural Information: Using real time and 1/8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. N-wave present.

Analysis: Same as transient 37 on channel 11 except the white male described in the visual information above fired this gunshot, and the position is changed slightly to within ± 3 feet of 13.09 feet east and 75.20 feet south of the SW corner of the 1-5-B APTS, or a distance of 76.57 feet directly from corner to muzzle blast (near left front corner of vehicle 9).

Conclusion: This transient at 12:31:00 on the channel 11 video tape (62.751 seconds after first recorded gunshot) is a supersonic gunshot and the muzzle blast occurs at a position within ± 3 feet of 13.09 feet east and 75.20 feet south of the SW corner of 1-5-B APTS. This gunshot is fired by the white male with shoulder length hair, tall, large frame in a blue-jean outfit seen with shoulder weapon with a banana clip on his right shoulder next to left front corner of vehicle 9.

Transient: 43 on channel 11, transient 38 on channel 2

Video Time: 12:31:17 on channel 11, 22:38:09 on channel 2

Absolute Time: 63.071 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Vicicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. Unknown if supersonic.

Analysis: This transient is a gunshot, unknown if supersonic, due to the fast rise time of the first peak and the aural information.

Microphone locations approximately same position as in transient 36 on channel 11.

The vicicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes off 1-S-B APTS, 1-S-B BLDG behind the camera, 9th tree, and various vehicles, it was determined that the gunshot occurred within ± 3 feet of ~~the~~ 1.18 feet east and 61.22 feet south of the SW corner of 1-S-B APTS, or a distance of 61.22 feet directly from corner to muzzle blast (very near right center front edge of vehicle 20).

Probably fired by white male in a red flannel-like shirt and blue jeans who is ^{on channel 11} first seen at 12:30:08. A better view of him is seen a few seconds earlier on channel 11.

Transient: 43 on channel 11, 38 on channel 2

Conclusion: This transient at 12:31:17 on the channel 11 video tape (63.071 seconds after first recorded gunshot) is a gunshot unknown if supersonic, as the muzzle blast occurs ^{within 1 foot} of 1.18 feet east and 61.22 feet south of the SW corner of 1-3-B APTS. This gunshot was probably fired by a white male in a red flannel-like shirt and blue jeans who is poorly seen at 12:30:08 on channel 11. A better view of him is seen a few seconds earlier on channel 11.

(29)

Transient: 44 on channel 11, 39 on channel 2

Video Time: 12:31:28 on channel 11, 22:38:17 on channel 2

Absolute Time: 63.361 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/4th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a very low amplitude gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visual Information: A very low amplitude transient waveform with the first peak having a fast rise time and a number of sharp edges. ~~No~~ ^{unknown} N-wave present.

Analysis: This transient is a ~~subsonic~~ ^{unknown if supersonic} gunshot due to the fast rise time of the first peak, the aural information, and the lack of known ~~of~~ a precursor N-wave. Possibly a pistol shot due to low amplitude.

See transient 36 on channel 11 for location of microphones.

Location of muzzle blast located the same as in transient 36 on channel 11, except position changed slightly to ^{within} ± 3 feet of 59.65 feet west and within ± 5 feet of 8.91 feet north of the SW corner of 1-S-B APTS, or a distance of 60.29 feet directly from corner to muzzle blast (approximately 70 feet from Morning Side Homes Recreation Building). Characteristics of this gunshot resemble transient 36 on channel 11.

Conclusion: This transient at 12:31:28 on the channel 11 video tape ^{unknown if supersonic} (63.361 seconds after first gunshot) is a ~~subsonic~~ ^{unknown if supersonic} gunshot, possibly from a pistol, and the muzzle blast occurs at a position 59.65 feet west (± 3 feet in the east-west direction) and 8.91 feet north (± 5 feet in the north-south direction) of the SW corner of 1-S-B APTS. This gunshot may have been fired from the same weapon as transient 36 on channel 11.

30

Transient: 45 on channel 11, 40 on channel 2

Video Time: 12:33:13 on channel 11, 22:40:03 on channel 2

Absolute Time: 64.899 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/4th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a relatively low amplitude gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visicorder Information: A low amplitude transient waveform with the first peak having a fast rise time and a number of sharp echos. Unknown ~~type~~ N-wave present.

Analysis: Same as transient 44 on channel 11.

Conclusion: This transient at 12:33:13 on the channel 11 video tape (64.899 seconds after first gunshot) is a ~~subsonic~~ ^{subsonic or supersonic} gunshot, possibly from a pistol, and the muzzle blast occurs at a position 59.65 feet west (± 3 feet in the east-west direction) and 8.91 feet north (± 5 feet in the north-south direction) of the SW corner of 1-S-B APTS. This gunshot may have been fired from the same weapon as transients 36 and 44 on channel 11.

(31)

Transient: 46 on channel 11, 41 on channel 2

Video Time: 12:33:26 on channel 11, 22:40:25 on channel 2

Absolute Time: 65.644 seconds on channel 11

Visual Information: Channel 11 shows an unidentified individual firing a weapon behind the right side of vehicle 10. Channels 2 and 8 have no information on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a low amplitude, but sharp, muzzle blast and a series of echoes.

Visicorder Information: A transient waveform with a low amplitude first peak but with a fast rise time and a number of sharp echoes. Unknown if supersonic.

Analysis: This transient is a gunshot, unknown if supersonic, due to the fast rise time of the first peak, the visual information of the aural information. The N-wave may have been blocked by vehicle 10.

Micropole locations approximately same position as in transient 36 on channel 11.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echoes off 1-S-B APTS, 1-S-B BLDG behind cameras at various vehicles, it was determined that the gunshot occurred within ± 3 feet of 45.57 feet east and 61.61 feet south of the SW corner of 1-S-B APTS, or a distance of 76.57 feet directly from corner to muzzle blast (near right rear corner of vehicle 23).

This gunshot^{is} fired by unidentified individual ^{just north of} ~~behind~~ the right side of vehicle 10.

Transient: 46 on channel 11, 41 on channel 2.

Conclusion: This transient at 12:33:26 on ^{the} channel 11 video tape (65.644 seconds after first recorded gunshot) is a gunshot, unknown if supersonic, and the muzzle blast occurs within ± 3 of 45.57 feet east and 61.61 feet south of the SW corner of 1-S-B APTS. This gunshot is fired by an unidentified individual just north of the right side of vehicle 10.

(32)

Transient: 47 on channel 11, 42 on channel 2

Video Time: 12:35:06 on channel 11, 22:41:29 on channel 2

Absolute Time: 66.724 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a relatively low amplitude gunshot-like sound is heard with a very sharp muzzle blast and a series of echos.

Visiorder Information: A low amplitude transient waveform with the first peak having a fast rise time and a number of sharp echos. Unknown if ~~the~~ N-wave present.

Analysis: Same as transient 44 on channel 11

Conclusion: This transient at 12:35:06 on channel 11 video tape (66.724 seconds after first gunshot) is a ~~subsonic~~ ^{unknown if supersonic} gunshot, possibly from a pistol, and the muzzle blast occurs at a position 59.65 feet west (± 3 feet in the east-west direction) and 8.91 feet north (± 5 feet in the north-south direction) of the SW corner of I-S-B APTS. This gunshot may have been fired from the same weapon as transients 36, 44 and 45 on channel 11.

Transient: 48 on channel 11, 43 on channel 2

Video Time: 12:36:03 on channel 11, 22:42:29 on channel 2

Absolute Time: 67.758 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and series of echos.

Visicorder Information: A transient waveform with a slightly attenuated first peak having a fast rise time and a number of sharp echos. Possible N-wave present.

Analysis: This transient is a supersonic gunshot^{possibly supersonic} due to the fast rise time of the first peak, the aural information, and the ^{precursor} N-wave.

Microphone locations approximately same position as in transient 36 on channel 11.

The visicorder peaks were then plotted on a 1" to 5' scale map using calibrated rulers, protractors, and various drafting equipment. A large number of locations on the map were calculated before a position was found that agreed with the echo times. By plotting echos off 1-S-B APTS, 1-S-B BLDG behind the cameras at various vehicles, it was determined that the gunshot occurred within ± 7 feet of 40.35 feet east and ± 3 feet of 57.09 feet south of the SW corner of 1-S-B APTS, or a distance of 69.88 feet directly from corner to muzzle blast (between vehicle 22 and 23).

Since the channel 2 and 11 video tapes do not show the gunshot, even though the camera are pointed in that direction, the gunshot ~~must~~ must have been fired below the raised trunk lid on vehicle 9.

Transient: 48 on channel 11, 43 on channel 2

Conclusion: This transient at 12:36:03 on the channel 11 video tape (67.758 seconds after first recorded gunshot) is a supersonic gunshot, possibly supersonic and the muzzle blast occurs within ± 7 feet of 40.35 feet east and within ± 3 feet of 57.09 feet south of the SW corner of 1-S-B APTS.

(34)

Transient: 49 on channel 11, 44 on channel 2

Video Time: 12:36:15 on channel 11, 22:43:05 on channel 2

Absolute Time: 68.010 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a relatively low amplitude gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visicorder Information: A low amplitude transient waveform with the first peak having a fast rise time and a number of sharp echoes. ^{underneath} ~~the~~ N-wave present.

Analysis: Same as transient 44 on channel 11.

Conclusion: This transient at 12:36:15 on the channel 11 video tape (68.010 seconds after first gunshot) is a subsonic gunshot, ^{underneath} ~~under~~ ^{of} ~~supersonic~~ possibly from a pistol and the muzzle blast occurs at a position 59.65 feet west (± 3 feet in the east-west direction) and 8.91 feet north (± 5 feet in the north-south direction) of the SW corner of 1-S-B APTS. This gunshot may have been fired from the same weapon as transients 36, 44, 45 and 47.

Transient: 50 on channel 11, 46 on channel 2

Video Time: 12:45:06 on channel 11, 22:51:27 on channel 2

Absolute Time: 76.703 seconds on channel 11

Visual Information: No information on what produced this transient except fragments seen flying off vehicle 15 on the channel 2 video tape.

Aural Information: Using real time and 1/8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Vesicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes following. N-wave present.

Analysis: The transient is a supersonic gunshot due to the fast rise time of the first peak, the aural information, the visual information, and the precursory N-wave.

The microphone locations approximately at same position as in transient 36 on channel 11.

~~Muzzle blast~~
Position located

Muzzle blast located as on transient ~~25~~ ²⁵ on channel 11 except the actual position slightly changed to be within ± 5 feet of 38.68 feet east and 61.05 feet south of the SW corner of I-S-B APTS, or a direct distance from corner to muzzle blast of 72.30 feet (between vehicles 10, 22 and 23).

Due to the characteristic N-wave and close proximity of the shots, trans 25 ~~is~~ probably was fired from the same weapon.

Transient: 50 on channel 11, 46 on channel 2

Conclusion: This transient at 12:45:06 on the channel 11 video tape (76.703 seconds after first recorded gunshot) is a supersonic gunshot and the muzzle blast occurs at a position ~~35~~ within ± 5 feet of 38.68 feet east $\frac{1}{2}$ and 61.05 feet south of the SW corner of 1-S-B APTS. The gunshot was probably fired from the same weapon as transient 25 on ~~channel~~ channel 11.

(36)

Transient: 51 on channel 11, 47 on channel 2

Video Time: 12:51:23 on channel 11, 22:58:14 on channel 2

Absolute Time: 83.275 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and $\frac{1}{8}$ th speed playback of high quality tape copies of the soundtracks of channel 1 and channel 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Visicorder Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. ^{Unknown if} N-wave present.

Analysis: The transient is a ~~subsonic~~ ^{unknown if supersonic} gunshot, due to the fast rise time of the first peak, the aural information, and the lack of a precursory N-wave.

See transient 36 on channel 11 for location of microphones.

Location of muzzle blast located the same as transient 36 on channel 11, except position changed slightly to within ± 3 feet of 59.65 feet west and ± 5 feet of 9.45 feet north of the SW corner of I-S-B APTS, or a distance of 60.33 feet directly from corner to muzzle blast (approximately 6 feet from Moving Side Homes Recreational Building). Very similar to transient 39 on channel 11.

Conclusion: This transient at 12:51:23 on ^{the} channel 11 video tape ^{unknown if supersonic} (83.275 seconds after first gunshot) is a ~~subsonic~~ gunshot, and the muzzle blast occurs at a position 59.65 feet west (± 3 feet in the east-west direction) and 9.45 feet north (± 5 feet in the north-south direction) of the SW corner of I-S-B APTS. This gunshot may have been fired from the same weapon as transient 39 on channel 11.

(37)

Transient: 52 on channel 11, 49 on channel 2

Video Time: 12:55:03 on channel 11, 23:01:25 on channel 2

Absolute Time: 86.652 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Acual Information: Same as transient 51 on channel 11

Visicorder Information: Same as transient 51 on channel 11.

Analysis: Same as transient 51 on channel 11.

Conclusion: This transient at 12:55:03 on the channel 11 video tape ^{of suppression} (86.652 seconds after first gunshot) is a ~~subsonic~~ ^{subsonic} gunshot; and the muzzle blast occurs at a position 59.65 feet west (± 3 feet in the east-west direction) and 9.45 feet north (± 5 feet in the north-south direction) of the SW corner of 1-5-B APTS. This gunshot may have been fired from the same weapon as transients 39 and 51 on channel 11.

Transient: 53 on channel 11, 50 on channel 2

Video Time: 12:55:21 on channel 11, 23:02:14 on channel 2

Absolute Time: 87.268 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 8th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard which distorts the recording systems. Sounds very close to microphones.

Vesicular Information: A transient waveform with the first peak having a fast rise time and then the rest of the waveform is distorted.
 unknown if supersonic.

Analysis: The transient is ~~at least one~~ ^{possibly two} gunshot very close to the microphones based on the fast rise time of the first peak of the aural information. ~~is~~ unknown if supersonic.

Based on the aural information the gunshot(s) occurred in the vicinity of the microphones, possibly at 49.41 feet ~~east~~ ^{west} and 138.09 feet south of the SW corner of 1-S-B APTS, or a direct distance of 146.66 feet from corner to muzzle blast (rear left rear corner of vehicle 29). Error rate unknown.

Microphone locations approximately the same as transient 36 on channel 11.

Conclusion This transient at 12:55:21 on the channel 11 video tape (87.268 seconds after the first recorded gunshot) is a ~~one~~ ^{one or possibly two} gunshot, unknown if supersonic, and the muzzle blast possibly occurs at 49.41 feet ~~east~~ ^{west} and 138.09 feet south of the SW corner of 1-S-B APTS.

Transient: 54 on channel 11, 51 on channel 2

Video Time: 12:56:23 on channel 11, 23:03:16 on channel 2

Absolute Time: 88.342 seconds on channel 11

Visual Information: No information noted on what produced this transient.

Aural Information: Using real time and 1/2th speed playback of high quality tape copies of the soundtracks of channels 11 and 2, a gunshot-like sound is heard with a very sharp muzzle blast and a series of echoes.

Vicinity Information: A transient waveform with the first peak having a fast rise time and a number of sharp echoes. N wave present.

Analysis: The transient is a supersonic gunshot due to the fast rise time of the first peak, the aural information, and the precursory N-wave.

Microphone locations approximately the same as transient 36 on channel 11.

Vicinity peaks were plotted as on transient 48 on channel 11 except position changed slightly to within ± 7 feet of 40.40 feet east and to within ± 3 feet of 57.38 feet south of the SW corner of 1-5-B APTS, at a distance of 69.98 feet directly from corner to muzzle blast (between vehicles 22 and 23).

Conclusion: This transient at 12:56:23 on the channel 11 video tape (88.342 seconds after the first recorded gunshot) is a supersonic gunshot and the muzzle blast occurs within ± 7 feet east of 40.40 feet east and ~~57.38~~ within ± 3 feet of 57.38 feet south of the SW corner of 1-5-B APTS.

Scientific Support:

A. Previous exams:

1. FBI - 100's involving silencers, ID's of gunshot, # of gunshots fired, etc.
2. Kent State
3. Kennedy Assassination - NAS Review

B. FBI Tests:

- a. Fired shotguns, etc. with microphones in different ~~at~~ directions
- b. Recorded other sounds - fireworks, high explosives, car backfires, banging sounds
- c. Rapid fire tests
- d. Silencer tests.